CANNER PACKER

MAY 1959

CANNED • DRY • FROZEN • GLASS

a consolidation of:
CANNER and FREEZER
FOOD PACKER
WESTERN CANNER and PACKER

Four Pennsylvania packers build new community sewage plant 32

Kaaawa Farms cans and freezes Hawaiian fruit juices for mainland market 28

Dehydrated onion: Industry likes it powdered; consumers like it minced (Cover) . . . 30

Quick delivery of

All-time **LOW PRICES** effective now

l-ASCORBIC ACID

You get fast action when you place your orders for *l*-ascorbic acid (vitamin C) with Roche. We know that your packs will not wait so we are geared to give you *quick delivery*.

Roche is a basic producer of *l*-ascorbic acid, which is identical chemically and biologically with vitamin C which occurs naturally. Roche *l*-ascorbic acid exceeds the standards of the U. S. Pharmacopeia and is perfectly suited for use in fruit freezing, fish fillet freezing, and juice packing.

Standard packings, ranging in size from 1 to 25 kilos, are available.

Use Roche pure *l*-ascorbic acid to protect the quality of your pack. When you make your product better you can expect to sell more of it.

Phone . . . wire . . . write . . .

VITAMIN DIVISION

HOFFMANN-LA ROCHE INC.

Nutley 10, New Jersey • NUtley 2-5000 • In New York City OXford 5-1400

Pacific Coast Distributor: L. H. BUTCHER COMPANY

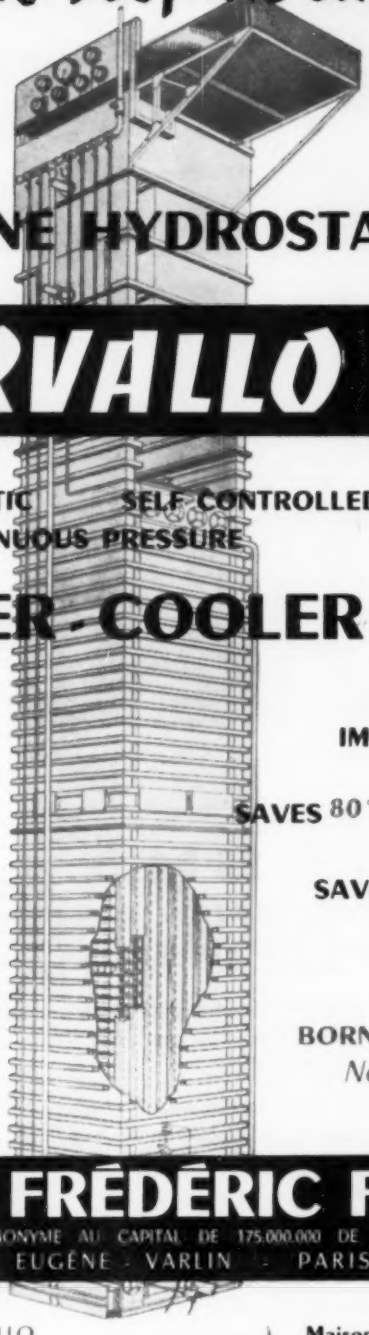
LOS ANGELES • SAN FRANCISCO • SEATTLE • PORTLAND • SALT LAKE CITY

ANgelus 2-4101 MArket 1-4210 ELliott 1856 CApitol 8-9676 HUnter 4-5221

Trademark: Roche®

In Canada: HOFFMANN-LA ROCHE LTD., 1956 Bourdon Street, St. Laurent, Montreal 9, P. Q.

a sensational step in canning



THE GENUINE HYDROSTATIC

CARVALLO

FULLY AUTOMATIC SELF CONTROLLED CONTINUOUS PRESSURE

COOKER - COOLER

IMPROVES QUALITY

SAVES 80 % STEAM & WATER

SAVES 100 % LABOUR

All products all sizes of cans & glasses all capacities

BORN IN FRANCE 1949
Now at it's best

BUILT in FRANCE by :

MAISON FRÉDÉRIC FOUCHÉ

SOCIÉTÉ ANONYME AU CAPITAL DE 175.000.000 DE FRANCS
8, RUE EUGÈNE - VARLIN - PARIS 10e

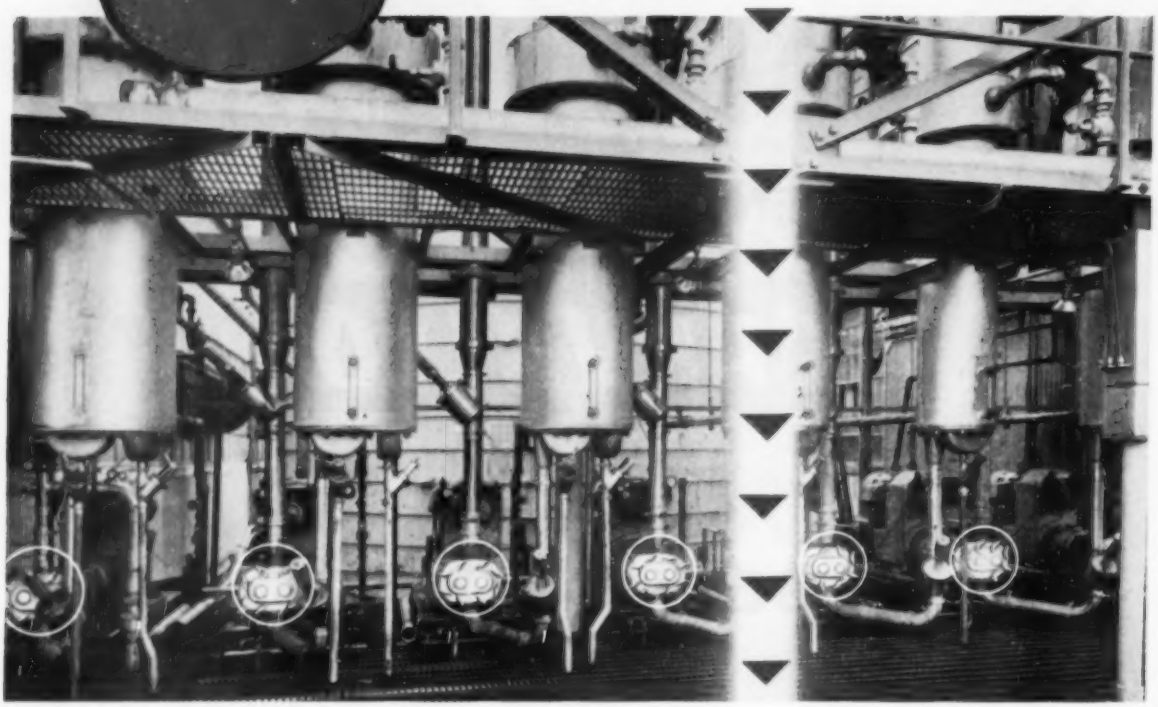
Licensee

Pierre CARVALLO
Consulting Engineer
24, Villa Dupont
PARIS 16e (FRANCE)

Please write directly, to :

Maison Frédéric FOUCHÉ
Food Machinery Department
1 à 7, Route de Saint-Denis
LA COURNEUVE (SEINE)
FRANCE

the heart of the big push at American Home Foods



American Home Foods, Inc.
Oakland California Plant

from tomato pulp to paste . . 36% solids

WAUKESHA

POSITIVE DISPLACEMENT

SANITARY PUMPS

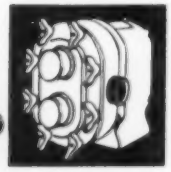
At the heart of the big push through this impressive multiple stage Thermovac Evaporator installation are 7 Waukesha 125 DO Stainless Steel Pumps.

American Home Foods, Plant Engineer, Mr. Peter Mayer, gets assured production output of a high concentrate . . .

"The installation of Waukesha Pumps in our operation resulted in a reliable up-to-7 day per week production with the only maintenance required being an "O" ring change at weekly intervals."

Leading processing plants handling dense concentrates with high viscosity have serious threats of costly pump maintenance and replacement . . . leading processing plants rely on durable corrosion-resistant Waukesha Sanitary Pumps.

Our engineering staff is always available to assist you with your pumping problems.



The Waukesha DO Sanitary Pump can be mounted in either a vertical or horizontal position . . . assured operating efficiency at both angles.

ONLY WAUKESHA OFFERS YOU THE CHOICE OF METAL OR RUBBER IMPELLER POSITIVE DISPLACEMENT PUMPS.

Waukesha FOUNDRY COMPANY

Pump Division, Dept. 19, Waukesha, Wisconsin

CANNER PACKER

volume 128, number 5. MAY 1959

Herbert A. Vance, Publisher

Editorial Department

Elverton B. Stark, Editor
500 Howard St., San Francisco 5
Telephone: EXbrook 7-1887

Dennis H. Murphy, Managing Editor
59 East Monroe St., Chicago 3
Telephone: FInancial 6-7788

Walter N. Clissold, Eastern Editor
1319 F. St. N. W., Washington, D. C.
Telephone: MEtropolitan 8-6707

Leo J. Livingston, Northwest Editor
71 Columbia St., Seattle 4
Telephone: MAin 2-1626

Dr. Wilbur A. Gould, Technology Editor
993 Kilbourne Dr., Worthington, Ohio
Telephone: TUxedo 5-6045

Anne Chalmers, News Editor
Chicago

Business Department

C. Melvin Carlson, General Manager
59 East Monroe St., Chicago 3
Telephone: FInancial 6-7788

Charles C. Baake, Circulation Manager
500 Howard St., San Francisco 5
Telephone: EXbrook 7-1887

William G. Simpson, Production Manager
Chicago

Sales Representatives

Thomas Vought
370 Lexington Av., New York 17
Telephone: MUrray Hill 3-8333

Norman Thomas
59 East Monroe St., Chicago 3
Telephone: FInancial 6-7788

Elverton B. Stark
500 Howard St., San Francisco 5
Telephone: EXbrook 7-1887

CANNER/PACKER is published monthly with two issues in September by **Triad Publishing Co.** at 817 West Market St., Louisville 2, Ky. Executive offices: 59 East Monroe St., Chicago 3, Ill. Telephone: FInancial 6-7788.

Address all subscriptions and payments thereof, changes of subscription address, Forms 3579 and other subscription correspondence to Triad Publishing Co., 500 Howard St., San Francisco 5, Calif.

Second class postage paid at Louisville, Ky. and at additional mailing offices.

Herbert A. Vance, President

William B. Freeman, Vice-president

Paul E. Clissold, Secretary-treasurer

Subscription rates: U.S. and possessions, Canada, $5.00 per year, $8.00 for two years, $10.00 for three years. Other countries, $10.00 per year, $16.00 for two years, $20.00 for three years. Single copies 50c each, except annual Yearbook number at $1.00 each. Copies of issues prior to current year, if available, $1.00 each.

Address all display and classified advertising correspondence, orders and payments thereof to CANNER/PACKER, 59 East Monroe St., Chicago 3, Illinois. Advertising plates, cuts and inserts should be shipped to CANNER/PACKER, c/o Gibbs-Inman Printing Co., 817 West Market St., Louisville 2, Ky.

Copyright, 1959, Triad Publishing Company.

COVER PICTURE: No more crying at home over raw onions is necessary, thanks to the new Instant Onion now being sold in retail grocery stores. Dehydrated onion products have been made for 30 years in operations like this, where moisture is removed from the sliced products in tunnels. Most of the pack has been sold to remanufacturers or institutions, however. Now Mrs. Housewife is being invited to buy, and sales records show she is responding with enthusiasm. For further details, see page 30.

FEATURES:

How Packers and Borough Solve Pennsylvania Waste Disposal Problem 27
Four fruit processing plants join with borough of North East, Penna., to build new sewage treatment system.

Tropical Packs Combine Canning/Freezing 28
Kaaawa Farm in Hawaii takes four tropical fruits, makes a dozen products, and sells to three different markets.

INSTANT ONION Is an Instant Success 30
Dehydrated onion was considered a not-too-popular product for consumers until processors tried taking the *minced* product.

IFT Award to Potato Flake Process 31
First industry award will be made at annual meeting in Philadelphia, May 17-21 for dehydrated potato product.

Home Preserved Wild Fruit Jellies Build a Business 32
Lakeview Berry Farm in Minnesota found that Itasca State Park tourists were looking for jellies that were "different."

INSTRUMENTATION in Food Products Manufacture 34
Part 2 of Herbert Roemer's article in the Processing Technology Handbook series, on selection and application.

SPECIAL DEPARTMENTS:

Business News Letter	7	**Food Merchandising**	57
Letters from Readers	10	**Suppliers News**	58
Food Technology	31	**Industry News**	60
Raw Products	43	**Association News**	69
Crops/Packs/Markets/Prices	44	**Coming Events Calendar**	74
New Equipment	50	**Index of Advertisers**	75
New Products	54	**Editorial**	76

In the Next Issue: *Taterstate Frozen Foods, a success story from Maine. . . How packing in glass helps sell Michigan kraut. . . How Coastal Foods built a hard-hitting management team in Maryland. . . Atlantic states propose revised grades for processing apples. . . Efficient grading of sliced peaches at Washington Canners. . . Developments in dried fruits in California.*

Extra Sales Appeal for Fruit Juice Blends!

● "VITAMIN C ENRICHED" on your label is a big attention-getter in the market. It alerts today's health-conscious shoppers to added nourishment and extra value.

If you have a line of fruit juice blends, why not cash in on this growing profit opportunity? The cost is a mere *fraction of a cent* per unit and Pfizer supplies vitamin C (ascorbic acid) in convenient easy-to-handle forms. Of added importance, Pfizer Ascorbic Acid provides protection against color and flavor fading that may result from oxidation during shelf life.

Let Pfizer, a leading producer of vitamins for 20 years, help you score a competitive advantage with vitamin C fortification.

Science for the World's Well-Being

Pfizer

Quality Ingredients for the Food Industry for Over a Century

CHAS. PFIZER & CO., INC. • *Chemical Sales Division* • 630 FLUSHING AVENUE, BROOKLYN 6, N. Y.

Branch Offices: Clifton, New Jersey • Chicago, Illinois • San Francisco, California • Vernon, California • Atlanta, Georgia • Dallas, Texas

CANNER PACKER BUSINESS NEWS LETTER

totally dedicated to serving canned, dry, frozen, glassed food processors

May 1959

Bulk shipment is now coming to the dry bean industry. Studies made by U.S. Dept. of Agriculture have shown that navy and other similar beans can be loaded into bulk rail cars in the Midwest and shipped to canners on the Atlantic Seaboard without significant damage. Sleeves around the discharge spouts help prevent skin-splitting, loading time is only a fourth as long as when bagged beans are handled, the expense of pallets and bags is eliminated, and quality sampling is made easier.

Only 2% of U.S. food producing and marketing companies owned more than one establishment in 1954, a study by Imogene Bright of USDA reveals--but this 2% employed 43% of all workers in food plants, and accounted for 52% of the industry payroll. The 3.1% of the meat firms which had more than one plant had 80% of the workers in that field. Among canned and frozen processors, 6.3% of the firms had more than one plant, and this group of companies had 55% of the employees of its industry. In the sugar business, 27.7% of the producers were multi-plant firms, and they accounted for about 87% of the workers.

Find out what the consumer wants if you wish to market a food product successfully. Distributors of dehydrated onion found that out, as an article in CANNER/PACKER for May relates. When they offered Mrs. Housewife what they liked, a powdered product, the reception was lukewarm. When they switched to what she preferred, a product similar to fresh minced onion, sales increased rapidly.

Sweetening materials not only are produced in tremendous quantities by the U.S. processed food business, but also are consumed in vast amounts by canners and packers. A study just made by CANNER/PACKER estimates that producers of canned, dry, frozen and glassed foods annually use $3\frac{1}{2}$ billion lbs. of cane and beet sugar, nearly 850 million lbs. of corn sugar and syrup, and a considerable volume of other caloric and non-caloric sweeteners. The total amount spent for these products by the industry is estimated at $385 million.

More processed food plants will be built or enlarged in 1959-60. Libby, McNeill & Libby's president, Charles S. Bridges, reports that his company will spend $50,000,000 in the next five years, equal to its capital investments during the last 10 seasons. Lady's Choice Foods, glassed food packer of California, is moving from its old San Francisco establishment to a new $2,000,000 plant in San Leandro. Coastal Foods Div. of Consolidated Foods Corp., is spending $330,000 in Maryland to up its capacity to 5.5 million cases of canned foods and 18 million lbs. of frozen. Continental Nut Co., Chico, Calif., will replace its packing plant (recently destroyed by fire, with loss of $500,000) with a new and modern establishment. R. T. French Co., Rochester, N. Y., is making major additions to its big dehydrated potato operation at Shelley, Idaho. Large new warehousing and distribution facilities have been announced by a number of western packers, including Hawaiian Pineapple Co. (Oakland, Calif.), Hunt Foods (Oakdale, Calif.), G. W. Hume Co. (Turlock, Calif.) A. E. Staley Mfg. Co. is building a 108,000 sq. ft. research center in Decatur, Ill. Expansions are announced by Aetna Packing Co., Baltimore, Md.; Birds Eye Div., General Foods (a $750,000 expansion in its Winter Haven, Fla. plant); Townsends, Inc., of Millsboro, Del.; Pearl Grange Fruit Exchange, Benton Harbor, Mich.; and Be-Mo Foods, Kalamazoo, Mich. The Triple M Packing Corp. will build a new food distribution center in South Philadelphia.

Edwin Fettig, President, and George Fettig of Fettig Canning Corp., Elwood, Indiana, and their Tomato MINCE MASTER.

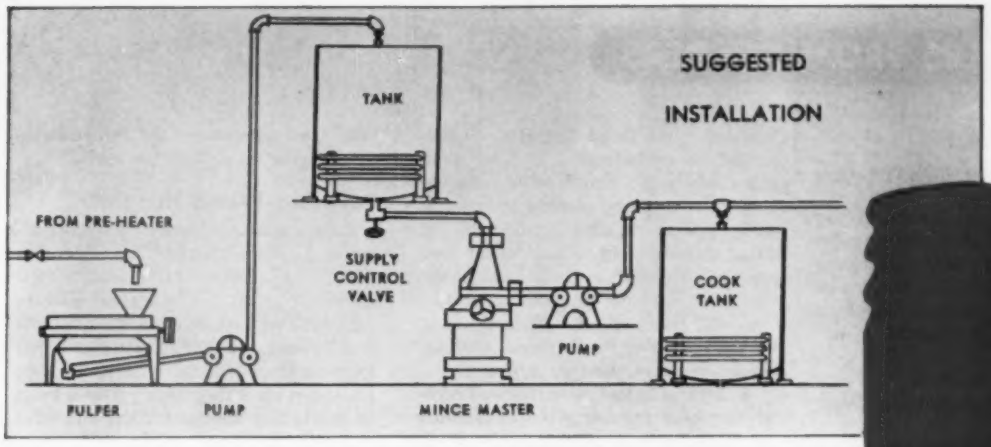
"Tomatoes Emulsified in MINCE MASTER Retain More Natural Juices -- More Natural Flavor! Make Better Catsup!"

—Reports Superior Laboratories*

Juice processed through MINCE MASTER at Fettig Canning Corp., Elwood, Indiana, made catsup of higher viscosity! Better color! No separation of solids!

LEFT: George Fettig is tightening sanitary fitting on cone-shaped casting through which pulp enters the MINCE MASTER.

*RIGHT: R. A. Havens, Director of Superior Laboratories of Indianapolis, Indiana, who engineered and reported on MINCE MASTER installation at Fettig Canning Corp.



Superior Laboratories suggests positioning the MINCE MASTER as diagrammed above. It should discharge into a tank, large enough to prevent backup, or be connected to a pump of capacity that will not slow the discharge of processed fluid. Vacuum in cutting chamber must be maintained.

HIGHLIGHTS OF SUPERIOR LABORATORIES REPORT ON MINCE MASTER PERFORMANCE

- Produced in continuous run a volume of 80 to 120 gallons per minute, averaging 30 tons of tomatoes per hour.
- Examination of 100 samples of catsup, puree, and juice processed through MINCE MASTER showed no separation or settling of solids after 30 days.
- 200 samples of tomatoes processed through the MINCE MASTER, compared with unprocessed material from identical fruit, showed no increase in mold count.
- Experts judged catsup processed through MINCE MASTER to be of better color!

FOR DETAILED INFORMATION AND TO ARRANGE PURCHASE AND INSTALLATION TO PROCESS YOUR '59 PACK THROUGH MINCE MASTER—WRITE OR CALL TODAY

Griffith

THE GRIFFITH LABORATORIES, INC.

CHICAGO 9, 1415 W. 37th St.
UNION, N. J., 855 Rahway Ave.
LOS ANGELES 58, 4900 Gifford Ave.

LETTERS FROM READERS

Labor Data Wanted

I am doing a graduate paper at Ball State Teachers College in Muncie, Indiana. The subject is "Labor in the Canning Industry." Any information on this subject or related subjects which you might be able to furnish me, or any other sources of which you might inform me, would be appreciated.

JAMES P. FOLAND
Foland Canning Co., 1100 Irving Way, Anderson, Ind.

• *Readers with information which will be helpful to Mr. Foland are invited to correspond with him.*—Ed.

News from Israel

I have completed one phase of my work here, that of developing the basic nutritional information on heat-processing of soya meal and flour extraction, and the technology of baking in Israel, bread prepared from long-extraction flour with 5% of dehulled toasted soymeal. Professor Sam Lepkovsky and Professor Max Milner have advised the Israeli government respectively on the nutritional and technological aspects of flour milling and soya meal processing. . .

In the meantime I have begun the development of a program in dehydration of fruit and vegetable products, and intend to concentrate on this for the remainder of my tour of duty in Israel.

MAYNARD A. JOSLYN
Food Processing Advisor, Israeli Ministry of Commerce & Industry, Food Division, Jerusalem Ave. 22, Jaffa, Israel.

• *Dr. Joslyn, widely-known U.S. food technologist, is on leave from University of California.*—Ed.

More on Dried Bananas

We are . . sending you a letter received from B. R. Shah & Sons of Nairobi. . . We would be very appreciative if you could arrange to forward (to them) whatever information you have regarding the demand for dried bananas in the United States, as well as prospective firms that would be able to handle this product for them.

V. M. LEWIS
Victor D. Bendel Co., Board of Trade Bldg., Chicago 4, Illinois.

"We intend to install a plant at Chisimaio, Italian Somaliland, for the manufacture of dried bananas. We understand that there is a considerable demand in your country for fresh bananas, and dried bananas (which would be considerably cheaper than the fresh ones) could be an alternative. We should be pleased to learn of your interest in the importation of dried bananas, in which event you could also give us an indication of the expected demand of your country." *Chandu Shah, B. R. Shah & Sons, First Floor Rooprani House, Gulzaar Street, Nairobi, Kenya, Africa.*

• *Several letters were received earlier this year regarding the availability of dried bananas from Liberia. B. R. Shah & Sons offer an alternate supplier, and interested importers are invited to write Mr. Shah directly.*—Ed.

Conference at Duesseldorf

The 4th international conference on public health information will take place at Duesseldorf, German Federal Republic, from May 3 to 9, 1959. Delegates from about 60 countries, representing public health education bodies, will exchange their experiences.

NORDWESTDEUTSCHE-GESELLSCHAFT
Ehrenhof 4, Dusseldorf, Germany

Gas Peelers Also Wanted

On page 12 of your February '59 Canner/Packer, there is a letter in regard to sending the names . . of manufacturers on the process of gas peeling of fruits and vegetables.

We ask that you also send to us the names of manufacturers of gas peeling equipment.

F. W. RODDENBERY
W. B. Roddenbery Co., Cairo, Ga.

• *Equipment firms able to help Mr. Roddenbery are invited to write him direct, to supplement the information we have forwarded to him.*—Ed.

Two Errors in Credits

The March issue carried an informative article entitled "Ask the Consumer How It Tastes." The author was Wayne P. Hansen, marketing research consultant of Morton Grove, Ill. His name should have appeared with his report, but did not do so.

In the April issue round-table discussion on "Corn for Canning and Freezing," the report on page 44 was properly credited to P. Schulz, B. Givens and H. McIntosh. However, the line showing that they are associated with Libby, McNeill & Libby was dropped.

Canner/Packer regrets these errors in its part, and tenders its apologies to these capable authors. Ed.

Relieving World Hunger

I have read your editorials with interest. . . The United Nations agencies (UNICEF, FAO, WHO and related agencies) and a number of private foundations, such as Rockefeller, Ford and Kellogg, are doing more significant long-range work in which the approach is on a thoroughly sound basis of increasing the production and educational resources within each area. In this way they are giving the kind of substantial assistance that offers great promise toward solving the world's problems.

A second part of the picture that has impressed me increasingly is the fundamental need to develop an efficient, modern trend in agriculture, food processing and food distribution in each of the countries, in order properly to make use of their respective resources and personnel. A hand-out type of distribution may afford assistance in a transitory way, but it does not make a significant contribution to the total picture, unless it is carefully planned in long-range terms and supported by requisite educational and economic guidance.

As striking examples for illustration, there are almost no "canned foods" or other type of food processing and distribution in countries like India, Africa, Brazil or El Salvador. If you have not had an opportunity to travel to some of these countries and envision what a modern food industry might do, I trust you will find that kind of a trip on your agenda whenever you can make the necessary arrangements.

CHARLES GLEN KING
Executive director, The Nutrition Foundation, Inc., 99 Park Avenue, New York 16, N. Y.

• *Our thanks to Dr. King for underscoring the need for modern processed food production and distribution developments in other lands, as suggested in Canner/Packer's November, 1958, issue.*—Ed.

Kind Words

I am well pleased with the magazine, and think the combination of several publications has been a wonderful improvement. . . My employer liked my copies so well that he had the company subscribe. . .

JOSEPH A. SWEZEY
Lahaina, Maui, T. H.

Pickles **look** so good in glass . . .

and **taste** so good . . .

Duraglas containers are available in a full range of sizes. Shown here are a pint refrigerator jar No. C-4091 and a quart jar No. C-4595.

Guard the precious **flavor** of your delicious pickles by packaging them in Duraglas® Jars

Sparkling glass containers are airtight and moisture-proof . . . so that nothing gets in and none of the wonderful flavor and aroma gets out. And clean, clear Duraglas containers constantly display their colorful contents.

Duraglas containers that safeguard pickles and hundreds of other fine products are made by Owens-Illinois. Their development reflects the same forward-looking imagination and research that goes into all Owens-Illinois products.

So look to Owens-Illinois for the finest in complete glass packaging—the right containers for your products, metal or plastic closures, fitments, label designs and shipping cartons imprinted with your sales message. Call your nearest Owen-Illinois office today.

Urge your distribution outlets to capitalize on National Pickle Week—May 21-30

DURAGLAS CONTAINERS
AN (O) PRODUCT

OWENS-ILLINOIS
GENERAL OFFICES · TOLEDO 1, OHIO

Building greater

consumer acceptance through

uniformly

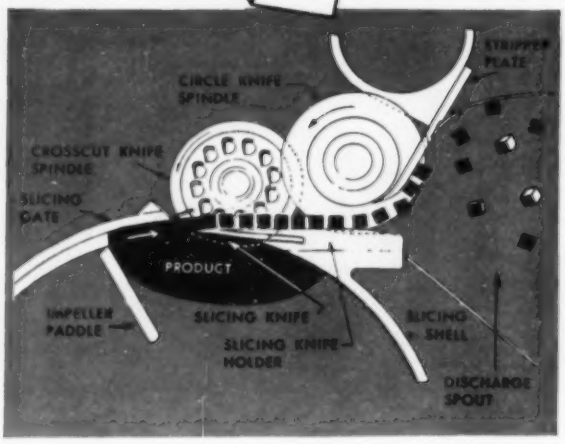
DICED

Peaches and Pears

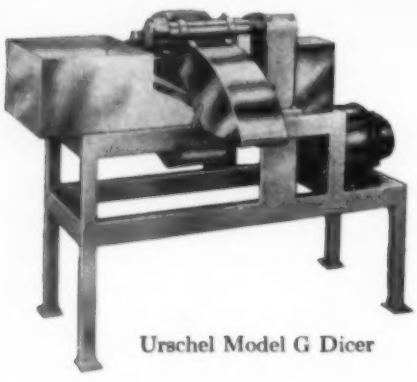
- One sure way to create greater consumer acceptance—and repeated sales—of your quality fruit pack is with the Urschel Model G Dicer.
- Stepped-up production is yours too, up to 8 tons per hour, when you dice your products on this unit. Consider this, too. The Model G adjusts for cuts of ¼" x ½" x ½", ½" x ½" x 1", ½" x 1" x 1", ½" x 1½" x 1½", or ½" cubes.

Not slicing peaches or pears?

- The Urschel Model G Dicer is ideal also for cutting pineapple, apples, potatoes, mushrooms, onions, cabbage, celery and peppers. Up to 11 tons per hour on these products. Complete details are available when you request Bulletin No. 5.



Simplicity and precision combine to provide uniformity in the Model G Dicer. Note the unique method of controlling the cut to prevent cracking by cutting parallel to the product strain.



Urschel Model G Dicer

Write:

URSCHEL LABORATORIES INC.
VALPARAISO, INDIANA

Designers and manufacturers of precision, high speed cutting equipment for food products

How One Canner Saved $14,250

with an

fmc Continuous Vertical Screw Press

Installation of the FMC Vertical Screw Press has in many cases resulted in the recovery of enough additional tomato juice to pay for itself in one to two seasons! The San Jose Canning Co., San Jose, California is no exception. Last season they incorporated an FMC Vertical Screw Press with their three FMC Pulpers and Finishers—*the performance of which was already established as being peak in the industry*—and averaged 75 gallons an hour additional juice recovery from an average of 40 tons per hour plant input.

In terms of yield per case, this amounts to 0.8 cases per ton more than that recorded the previous season *without* the Vertical Screw Press. And in dollars, San Jose Canning Co. realized a savings of $14,250 during the season—more than two-thirds the cost of their press installed.

"Needless to say, we're highly pleased with the job this equipment is doing for us," says San Jose Canning Co. "In addition to its high recovery, we find our costs of maintenance and cleaning are negligible."

For information on how this FMC Press can capture lost profits in your tomato operations, just write or call your nearest FMC representative—today.

FMC Vertical Screw Press features "Counter-Flow" design for highest fluid recovery. Press cake is quickly and easily formed at start-up; "channeling" is eliminated, preventing loss of unpressed material; flow of fluid is downward—doesn't re-wet the dry pomace. Gentle pressing action means high product quality—even while greatly increasing recovery.

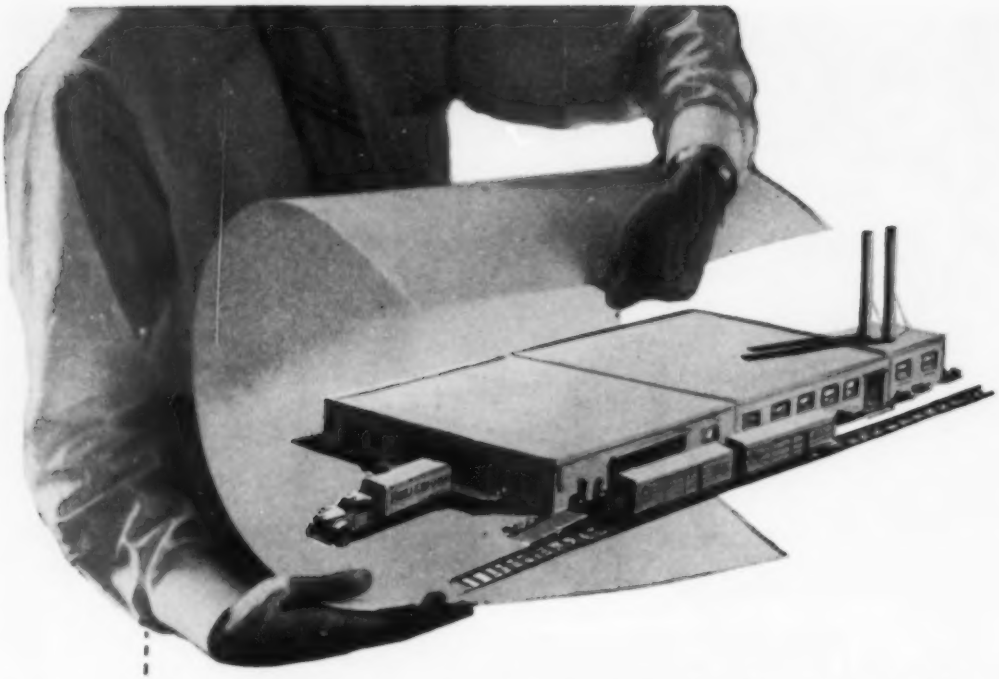
Putting Ideas to Work

FOOD MACHINERY AND CHEMICAL CORPORATION
Canning Machinery Division
General Sales Offices:
WESTERN: SAN JOSE, CALIF. • EASTERN: HOOPESTON, ILL.

Sometimes a canning problem will have a solution as obvious as a sunset. Many of the answers, however, require a persistent search. If you've been wrestling with a canning problem that seems insoluble, some of Canco's determination may help you solve the puzzle. It's worked before . . . many, many times! Your first step is to call the nearby Canco representative. He'll be glad to tell you how alert, imaginative Canco service can make your operation *more efficient, more profitable*. Call today!

CANCO Division AMERICAN CAN COMPANY

NEW YORK · CHICAGO · NEW ORLEANS · SAN FRANCISCO



next to wrapping your plant in asbestos...

. . . your best protection against FIRE LOSS is insurance through CANNERS EXCHANGE — where Food Processors have enjoyed 52 years of top quality insurance coverage!

Here are the qualifications that have secured for Canners Exchange an unchallenged position of leadership in this field:

- **Broad and comprehensive policies**
- **Personalized service from the Warner trained field staff**
- **Cooperative and sympathetic handling of loss claims**
- **Prompt payment of claims**
- **Lowest net costs—consistently—for the industry**

1958 Canners Exchange savings distribution to Policyholders totaled	Total savings to date have amounted to
$1,366,591	**$34,427,012**

To discover the advantages which you can secure on your fire insurance coverage, write us today. No obligation, of course.

Canners Exchange®

LANSING B. WARNER, INC.

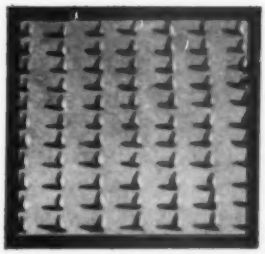
4210 PETERSON AVENUE • CHICAGO 46, ILL.

52 YEARS OF DEPENDABLE SPECIALIZED FIRE INSURANCE FOR FOOD PROCESSORS

BRAND NEW FROM SIMPLICITY!

3'x3' MULTI-PURPOSE SCREEN

- pricking
- scalping
- sizing
- dewatering
- trash removal
- industrial waste removal



PRICKING PANEL INCREASES THE RATE OF BRINE OR SWEETENING PENETRATION

The Simplicity "pricking panel," shown at left, is entirely new in the industry; it provides fine mechanical perforations of fruits and vegetables and increases the rate of brine and sweetening penetration. Each and every fruit or vegetable passing over this vibrating panel receives many tiny perforations, thus enabling faster and better penetration of brine or sweetening.

The new Simplicity 3' x 3' Multi-Purpose Screen, with its complete versatility, offers the entire food industry a revolutionary way to cut food processing costs with higher production speeds, a more uniform product and greater flexibility for multi-purpose use. The Multi-Purpose Screen is adaptable to a number of operations and has been used successfully to size, prick, dewater, scalp and remove trash from a number of fruits and vegetables.

The screening section of the Simplicity Multi-Purpose Screen can be equipped with screen cloth of any specification and can be easily replaced with the new pricking panel. The machine itself can be constructed of mild or stainless steel and stainless steel wire cloth is normally used.

Simplicity offers expert counsel for food screening problems based on unequalled experience in screen applications. For more information on Simplicity food screening equipment, write Department 7, Simplicity Engineering Company, Durand, Michigan.

Simplicity
TRADE MARK REGISTERED

ENGINEERING COMPANY·DURAND 21, MICHIGAN

SALES REPRESENTATIVES IN ALL PARTS OF THE U.S.A.

FOR CANADA: Simplicity Materials Handling Limited, Guelph, Ontario.

FOR EXPORT: Brown & Sites, 50 Church Street, New York 17, N. Y.

now you can ECONOMICALLY inhibit rust ON TIN CANS IN SHIPMENT AND IN STORAGE

As a major supplier to the steel industry of protective papers for the packaging of a variety of steel products, Cromwell Paper Company conducts continuing research on industry packaging requirements and develops special papers to meet those requirements.

FERRO-PAK, a chemically impregnated paper that inhibits rust, was developed by Cromwell's research and development department to protect tinplate in shipment from the steel mills to the can manufacturers. In wide use today by all of the major tinplate producers, FERRO-PAK meets the standards set forth by the Food and Drug Administration of the Department of Health, Education and Welfare.

And now... as a result of further research, Cromwell FERRO-PAK is available in a new form for positive, low-cost protection of tin cans in shipment and storage. For complete information on this new development, return the coupon below.

Cromwell PAPER COMPANY

180 North Wabash Avenue • Chicago 1, Illinois • DEarborn 2-6320

Please send information on **FERRO-PAK** for inhibiting rust on tin cans.

Name_____ **Title**_____

Company_____

Street_____

City_____ **Zone**____ **State**_____

Manufacturers of: Papers (Impregnated • Coated • Laminated • Reinforced • Flexible) • Bags • Sacks • Liners • Covers (Single and multiwall construction, using all types of material to carry, cover or protect all types of products).

© THE CHAMPION PAPER AND FIBRE CO., 1958
Reproduced with permission of copyright owner, The Champion Paper and Fibre Company

To preserve the tree-ripe flavor and texture...
Penford Canners Corn Syrup

PENICK & FORD, LTD.
INCORPORATED

750 THIRD AVE., NEW YORK 17, N. Y.; 1531 MARIETTA BLVD., ATLANTA, GA.; CEDAR RAPIDS, IOWA; 18 CALIFORNIA ST., SAN FRANCISCO 11, CALIF.

S-K 450

THIS NEW Standard-Knapp 450 Gluer-Sealer is the end-result of a close survey of user requirements. Here are the features you said you wanted: more accurate glue application (no adhesive on the product) . . . glue pots and rollers that can be quickly removed for cleaning and readily interchanged for both upper and lower application . . . sealed ball bearings that eliminate daily lubrication . . . quick and positive manual adjustment for case size changes . . . a wider range of case sizes . . . plus many, many more advantages that add up to reduced operating costs, uniformly attractive case appearance, better product protection.

Emhart Manufacturing Company
Portland, Connecticut
Standard-Knapp Packaging Equipment

EMHART

closing date

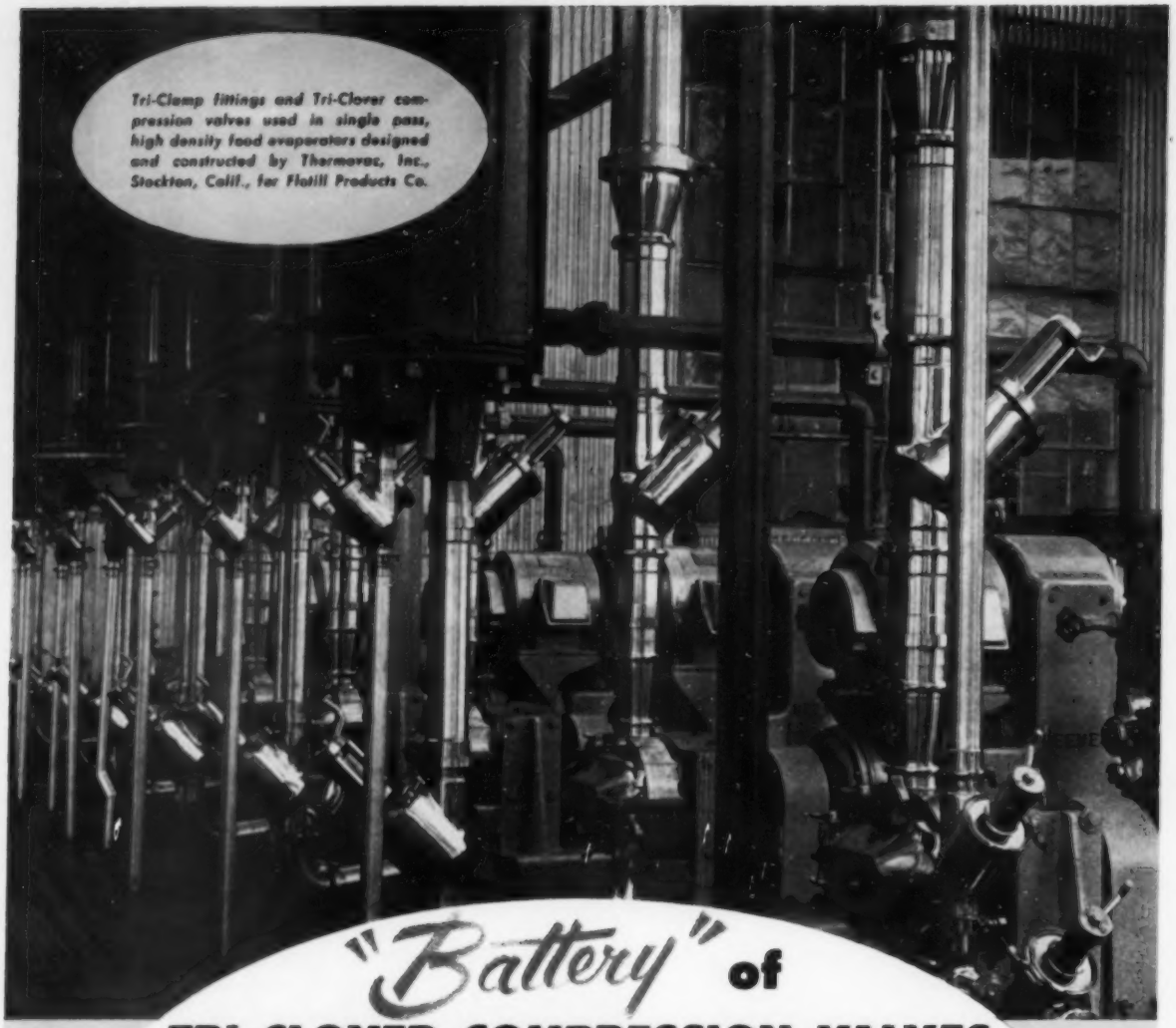
The first crucial test of packaging efficiency is its ability to match production speeds . . . As products are finished, packages should be ready for automatic filling, sealing and casing for shipment. CCA paperboard packaging – folding cartons, fibre cans and shipping containers – meet this test continuously, on a scale as broad as our national production.

The close integration of structural design and machinery development makes this possible. CCA structural designers equip the frozen food product with packaging to meet distribution demands . . . CCA machinery development specialists equip the package with machinery to meet production demands. This highly efficient combination works for frozen food packers everywhere.

CONTAINER CORPORATION OF AMERICA

CCA

FOLDING CARTONS
SHIPPING CONTAINERS
SEFTON FIBRE CANS



Tri-Clamp fittings and Tri-Clover compression valves used in single pass, high density food evaporators designed and constructed by Thermovac, Inc., Stockton, Calif., for Flotill Products Co.

"Battery" of

TRI-CLOVER COMPRESSION VALVES

connected with TRI-CLAMP® Sanitary Fittings make compact—easy to clean installation at West Coast Cannery

This view is an excellent example of the way in which Tri-Clover Division's Tri-Clamp fittings and unions simplify and save space on what otherwise might be an extremely complex, hard to install, hard to clean piping and equipment arrangement. In this case, the Tri-Clamp fittings connect a large "battery" of Tri-Clover compression valves . . . one of the many types of sparkling-clean stainless steel valves and fittings used by food processors from coast to coast.

For stainless steel corrosion-resistant fittings, valves, pumps and tubing to protect against product contamination, be sure to specify TRI-CLOVER . . . the Mark of Quality.

See your nearest Tri-Clover Distributor.

TRI-CLOVER

LADISH CO.

Tri-Clover Division

Kenosha Wisconsin

Export Dept., 8 So. Michigan Ave., Chicago 3, U.S.A. (Cable: TRICLO)

IN CANADA: Brantford, Ontario

S-457R

Cold facts about liquid sweeteners

Most canners know you save substantially on labor and handling when you use liquid sweeteners. But do such sweeteners give you the qualities you want in your finished product?

The answer is YES—when you use Rex and Globe corn syrups. These uniformly high grade syrups offer all of the processing advantages of solid sugars. They preserve natural fruit color, enhance true fruit flavor and assure excellent eating qualities.

For detailed information, and technical assistance in adapting these fine syrups to your needs, contact our nearest sales office or write direct.

REX® and GLOBE® corn syrups

CORN PRODUCTS SALES COMPANY • 17 Battery Place, New York 4, N. Y.

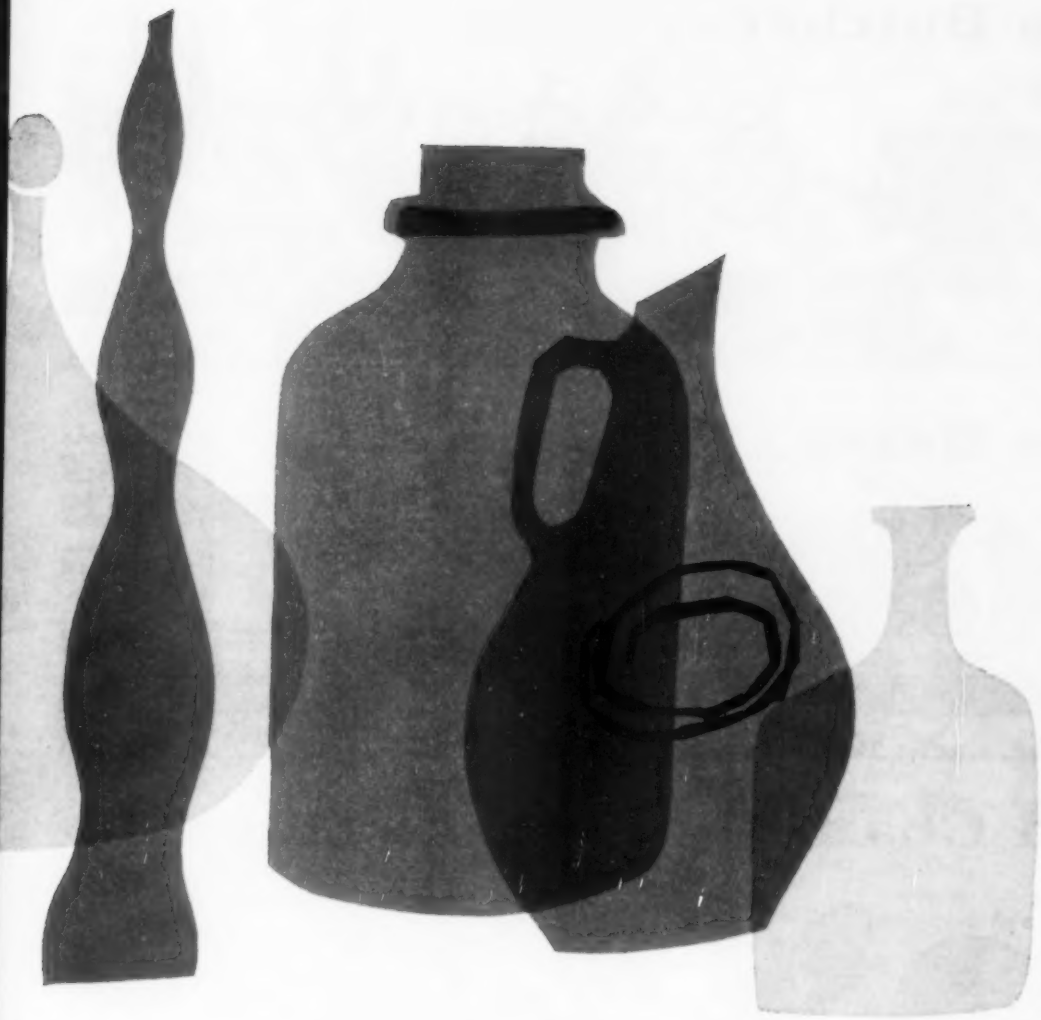
Makers of CERELOSE® brand dextrose sugar. REX® and GLOBE® corn syrups for the Canning Industry.

Advance Styling ...offers more product

H-A's new service adds exciting impact to your package, for greater sales appeal on retail display. We employ advanced styling and design to help you satisfy your customers—to meet their proven demand for new and better products, packaged most conveniently—a practical service, imaginatively conceived . . . and dedicated to your future planning and immediate market.

So think for just a moment—*What do you make that can be improved upon now, that can be better shaped for the future! What would you like to make—and how will you sell it, without advanced styling and design!*

Write Wheeling, or ask your H-A representative how this practical, new service can be put to work for your products today!



and Design Center

excitement with an exciting, new service

HAZEL-ATLAS GLASS

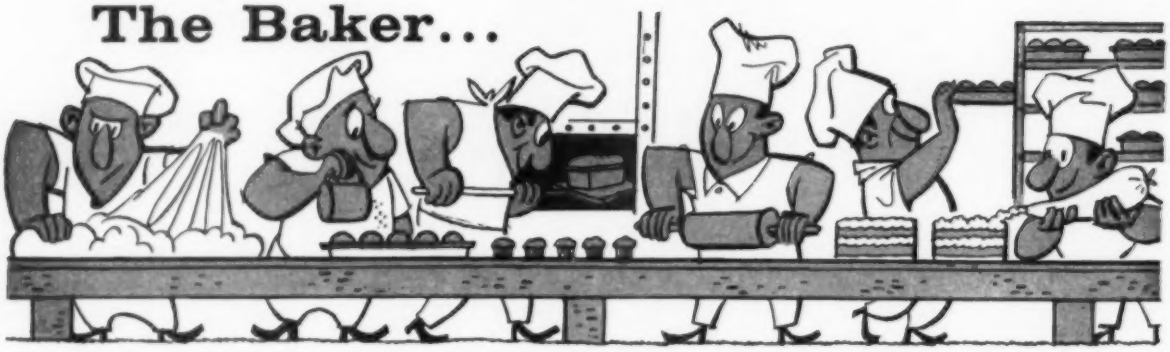
division of

CONTINENTAL CAN COMPANY

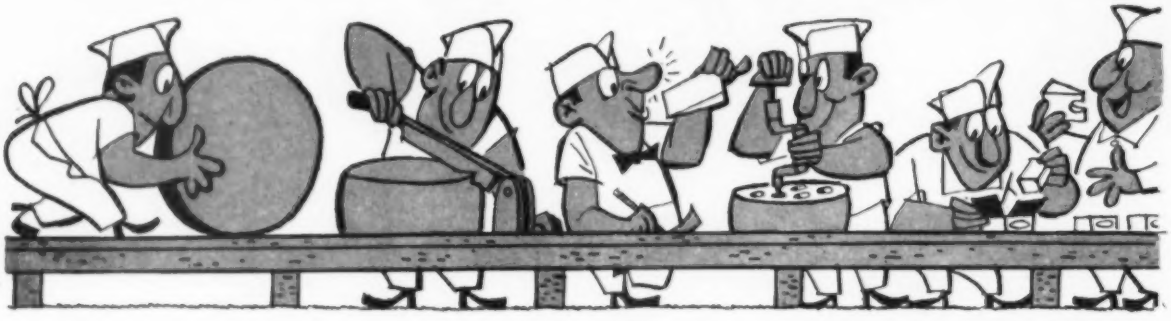
Wheeling, West Virginia

The Butcher...

The Baker...



and Champion Cheese Maker...



PREFER THE PURITY OF Diamond "Flake" Salt

• In meat packing, baking, the making of dairy products or the processing of any fine foods, you probably take high quality suppliers for granted. You can—with Diamond Crystal.

The high uniform purity (99.95%) of Diamond "Flake" assures true salt flavor. And it is quickly soluble to bring out the best in your products.

If you have a salt problem—call The Man from Diamond Crystal. He has the facts, the proof—and the service.

Diamond Crystal Salt Co.

Akron, Ohio • St. Clair, Mich. • Jefferson Island, La.

How Packers and Borough Solve Penna. Waste Disposal Problem

Community builds sewage facility and processors underwrite cost with fees

By Robert Dyment

The job of waste disposal is a big one for many canning and freezing factories, whether operations are seasonal or on a 12-month basis. One means of handling this task is by a cooperative effort between the local town government and the processing companies.

The borough of North East, Penna., solved the problem in such a partnership method, working with its four fruit processing plants—Welch Grape Juice Co., Keystone Cooperative Grape Co., Sunshine Packing Co. and North East Packing Co. All but the first of these discharge their waste into the borough sewer system, for treatment with the domestic waste.

The original plant, one of the first trickling filter units in northwestern Pennsylvania, was built in 1914 to serve a population of 2,500. By 1935 the number of inhabitants to be served had grown to 3,500, the fruit processing plants were beginning to expand, and the treatment plant had to be increased to a population capacity of 6,000. No further enlargement was made until the present construction program was completed in 1957.

In 1949, however, a complete and thorough survey was made of the sewage load, and of the capacity of the disposal facilities. This revealed that during the fruit season—which begins about July 1 with cherries, reaches a climax in late September with tomatoes and grapes, and ends about November 1—the sewage system was receiving an average equivalent population load of approximately 40,000, with peaks as high as 66,000. The B.O.D. seldom dropped below 1,000 ppm during the season, and sometimes ran as high as 3,000 ppm.

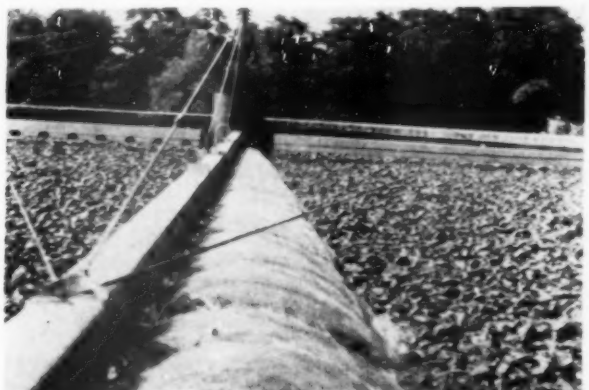
The study also showed that as the season progressed, the efficiency of the waste disposal plant declined. The unit consisted of primary settling tanks, a fixed-nozzle standard-rate filter, and an inadequate secondary settling tank (25-minute detention). When the filter first began to receive the heavy seasonal load, it removed an average of 91% of the B.O.D., and sometimes as high as 98%. But during the tomato season, removal dropped to an average of 85%, and at the height of the grape harvest it declined still further to 67%. Sudden peaks were not the major problem, but extended periods when a facility designed for up to 500 lbs. per acre foot was attempting to handle 3,000 lbs.

The effect of the overloading was most apparent in Sixteen-Mile Creek. Fish life was destroyed, and residents of the area made many complaints about the unpleasant odors which developed.

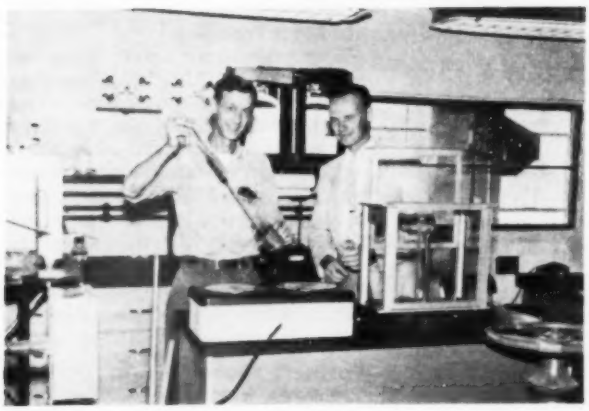
In 1955, the council of the borough reached an agreement with the four fruit processors as to how the problem could be solved through their mutual efforts. Welch would build its own new plant, and the other three companies would utilize an improved borough system, paying a good share of the cost in the form of fees determined by their flows and the strength of their wastes. Individual measuring and sampling stations in the plants would determine the rates.

A pilot plant was set up in the vicinity of the Welch factory, and data from its operations were used for the new Welch waste facility, and the borough system, both of which went into operation in 1957.

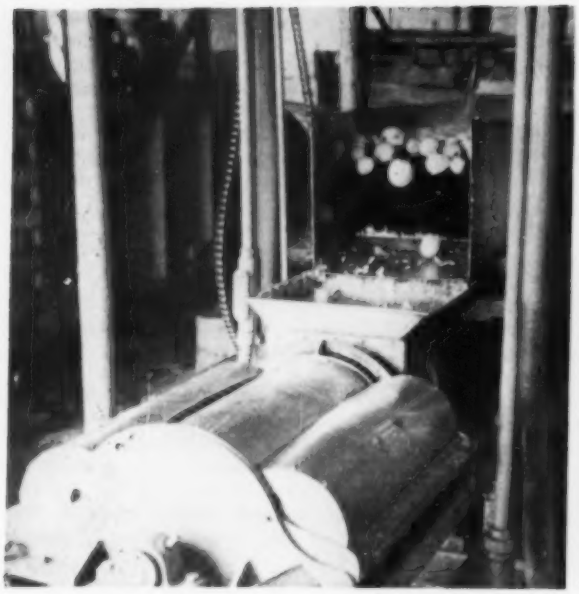
The North East plant now consists of a high-rate filter, which converts a large portion of the dissolved solids, a standard-rate filter to remove the more difficult remaining solids, and three intermediate settling tanks. Studies had shown that filtration accounted for almost all the B.O.D. removal, so heavy reliance was placed on this type of unit, rather than on primary settling tanks. So long as the acid wastes are limed before they are discharged, the new facilities have proved completely adequate.



NEW FILTER (upper view) which carries the major share of the load in the new Pennsylvania waste disposal plant utilized by both the borough and a trio of fruit processors in the area.



CONTROL LAB, here manned by Ford Scott, disposal plant operator, and John Hallenburg, engineer in charge of construction of the project, permits close watch on performance of the facility.



1 PROCESSING OF GUAVAS, after they have been inspected and unloaded from field crates, begins with their passage over a belt conveyor (background) to Food Machinery pulpers (foreground). Two units are used, one with coarse screens for removal of seeds and skins, one with finer mesh for finishing. Safety cover of the conveyor has been removed so the fruit can be seen.

2 LOOKING AS SURPRISED as they must feel in this tropical setting is this battery of Morehouse mustard mills. They are utilized in some of the products to give an extra finishing treatment, breaking down the cells and producing a highly smooth product. Products to be frozen, and those to be put up in shelf-pack cans, are handled in this versatile and efficient preparation department.

Tropical Packs Combine Canning/Freezing

Dual processing method permits Kaaawa Farm in Hawaii to pack a variety of products and sell to three types of markets

By THOMAS W. WATSON

A combination of canning and freezing techniques has enabled Kaaawa Farm, Ltd., Honolulu, T. H. to utilize four exotic island raw materials in production of tropical fruit products for three kinds of markets.

From four fruits—guavas, papayas, passion fruit and pineapple—the company produces a line of canned nectars which is distributed throughout the rest of the United States. These include guava, papaya, papaya-passion fruit and papaya-pineapple.

Processes Are Similar

Frozen guava and papaya purees, and passion fruit juice are also produced by Kaaawa Farm for two island markets—the U. S. armed forces and the local institutional trade.

Methods of preparing and preserving the three items which bulk largest in the mid-Pacific operation—guavas, papayas and passion fruit — are so similar that this seemingly complex activity has been made relatively simple in the processes worked out during the firm's 12 years of operation. Pineapple, the fourth ingredient, is simply added to one of the others in the form of juice.

Raw products, obtained from both wild and cultivated sources, arrive at the plant in crates. After quality inspection, they are pureed (as shown in pictures 1 and 2), drawn off through stainless steel lines by sanitary pumps and filled into 46-oz., 96-oz. and 5-gal. cans.

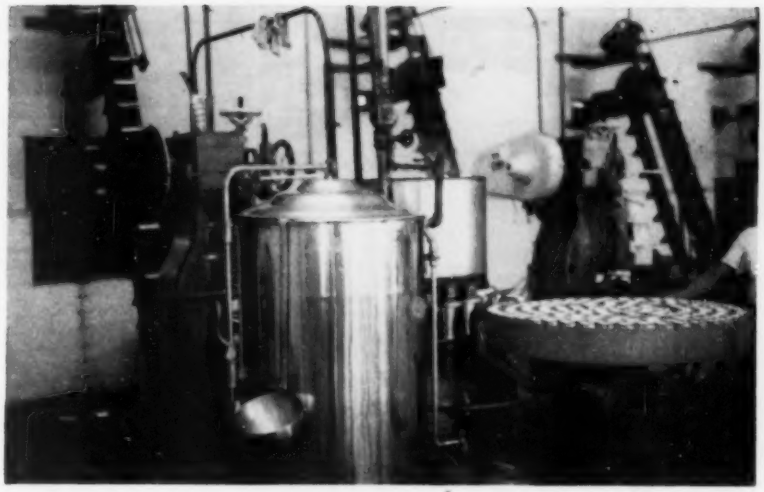
Air Blast Freezing

The raw material is then taken immediately to an adjacent cold-storage plant where it is sharp-frozen under air blast. It is finally put into zero storage.

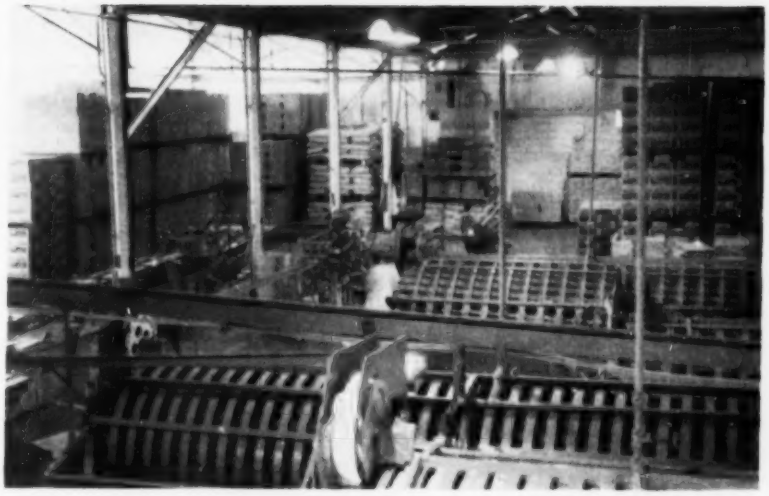
Stock for the shelf packs, meanwhile, is handled through steps shown in photos 3 and 4. Labeled and cased, it is then ready for distribution to island consumers and for shipment to West Coast mainland warehouse facilities. From these points reshipment is made to the balance of the country.

Partners Found Farm

Kaaawa Farm was founded early



3 BLENDING of a variety of ingredients follows pulping, in stainless steel vessels like the one in the foreground in this picture. Papaya or guava pulp is mixed with sugar, fruit acids and water, and some packs also contain pineapple juice, lemon juice and U. S. certified color. After these are well blended, the stock moves to FMC rotary fillers (one is in the center background) to which workers feed cans by means of the turntable shown at right. En route to the fillers, the nectars are flash-pasteurized, and are therefore filled hot. Immediately after filling, cans are closed with double seamers and then are carried off by elevator-conveyors (background).



4 FINAL STEPS in the canning procedure take place in this busy area. The cans are first given a short water bath, and then are cooled in the continuous, agitating, rotary equipment in the foreground of this scene. Conveyors then carry them to CRCo-NewWay and FMC-Kyler labelers. Automatic casers and case-sealers complete the packaging operations, after which the finished goods are palletized and stacked until shipping time.

in 1946 by George Y. Bennett, a retired sugar plantation manager, and Erwin Earl, who had previously been a sugar company chemist and a lieutenant-colonel in the U. S. Air Corps.

Today, Kaaawa Farm canned packs are sold to private label buyers as well as under the firm's own brand names, "Pearl Harbor" and "Kulana." Two can sizes are offered—an 18-oz. No. 2 and a 46-oz. 3-cylinder.

In addition to their exotic and flavor appeals, Kaaawa's packs rate well dietetically. They contain generous amounts of vitamin C and, for weight-watchers, average little more than 60 calories per 100 grams.

The production of frozen and canned fruit juices takes an additional significance with the approaching statehood of Hawaii. The tropical fruits lend a diversification to an island whose economic house seems to be built upon the foundation of Sugar, Pineapple, Tourists, and the U.S. armed forces.

The success of these products may bring a further development of island products for production and sale within the 50th state and for shipment to the mainland for sale in the other states.

FOUR PACKS of Kaaawa Farm are shown in the picture just above. The papaya nectar at far left and the guava nectar next to it carry the company's featured brand, "Pearl Harbor." Papaya also is marketed under the "Kulana" label, and this, too, is used for the papaya-pineapple blend. All four labels proudly proclaim that these tropical food beverages come from the Hawaiian archipelago.

PRODUCT OF THE MONTH

DEHYDRATED MINCED ONION, like that contained in the packages in the upper picture, can be translated into delicious foods like those in the lower view. That's why . . .

INSTANT ONION Is an Instant Success

Dehydrated minced onion is the newest dry-packed product to achieve signal success in the field of retail food merchandising.

This is not a new food. It was introduced some thirty years ago, at a time when the vegetable drying business—after having become a big-time operation in World War I—had almost disappeared from the scene in the United States.

At first the processed onion, and its companion processed garlic, created almost no stir at all. But in the late 1930's packers of other types of foods began to find that these dried materials—standardized in flavor and quality, popular with workers in their plants, available the year around, economical to use—were excellent ingredients in such products as catsup, soups, stews, gravies, salad dressings, sauces, pickles, etc.

World War II brought a resurgence of the vegetable dehydration business, and saw production shoot up to well over 200 million lbs. of all varieties. When the crisis was over, and the postwar drop-off developed, the cutback stopped at a point well above the prewar level. A major share of this permanently-increased production was in onion, which was being used by more and more remanufacturers.

Next came the growth of the institutional trade. Restaurant chains, hotels, steamship lines, factory cafeterias, etc., began to find the same merits in processed onion that food manufacturers had discovered before them. The retail market also was explored. A modest trade was developed, but in general the housewife remained apathetic to the packs which were offered to her in the grocery stores.

Employees Liked It Minced . . .

Then the producers of the material made an interesting discovery. Workers in their own plants were enthusiastic users of dehydrated onion in their own homes—but they did not use the flakes and powders which were on the retail store shelves. Instead, they took home processed minced onion.

Dehydrated onion is produced largely by three western firms, using similar methods. The pungent bulb is sliced, and the slices pass through dehydration tunnels, where all but about 4% of the moisture is removed by heated air passing through and over the product. The finished food is then graded into various sizes, ranging (from large to small) through the categories of large-sliced, sliced, large-chopped, chopped, minced, ground, granulated and powdered.

Consumers Liked It Too

The industry reasoned that if the housewives it employed liked the minced product, so too would other homemakers. They suggested this to some of the national and regional food merchandising organizations, and the latter agreed to test-market the product. Results were most pleasing, and instant onion passed almost overnight from an experimental idea to a commercial success.

Today the product is being sold by national companies of the calibre of R. T French Co., Borden Co., McCormick & Co., Durkee Famous Foods, Wyler & Co. and Spice Islands Co. In addition, many firms with brands marketed regionally are also introducing packs. And so the onion dehydrated business, already selling large quantities of its product a year to manufacturers, and additional quantities to institutions, now has achieved a break-through into its third market —one which potentially could be the largest of all.

FOOD TECHNOLOGY

IFT Award to Potato Flake Process

Dr. Berton Clark

Dr. Samuel Lepkovsky

The Nineteenth annual meeting of the Institute of Food Technologists will be held in the Bellevue Stratford Hotel in Philadelphia, May 17-21.

Three awards are of special significance.

- The first Food Technology Industrial Achievement Award will be given for the development of a completely new dehydrated mashed-potato product. James Cording, Jr., and Miles J. Willard, Jr., invented the process under the direction of Roderick K. Eskew. The work was done at the Eastern Division Engineering and Development Laboratory of the USDA Agriculture Research Service.

- The Nicholas Appert Award will go to Dr. Berton S. Clark, presently director of research for the Maine Sardine Canning Industry. Dr. Clark has made distinguished scientific contributions in tin plate improvements, in formulating regulations for heat sterilization, and in official capacities on national research organizations.

- The Babcock-Hart Awardee for 1959 is Dr. Samuel Lepovsky, professor at the University of California. Dr. Lepovsky's work has centered around nutrition from his early years at the university. He was one of the pioneer researchers working with vitamin B complex.

Monday: General session in the morning. Technical sessions in the afternoon on general research, cereal and baked products, and fruit products.

Tuesday: Technical session on radiation and preservation, heat processing, and poultry in the morning. The Babcock-Hart Award address at 1:45 p.m. Technical sessions on general research, meat and food engineering in the afternoon. A symposium on production at 4 p.m.

Wednesday: Technical sessions on meat, fish, and quality control in the morning. Symposium on food additives at 9 a.m. Nicholas Appert Award address 1:45 p.m. Technical sessions on frozen foods, packaging, and pressurized containers in the afternoon.

Exhibits of Equipment and Supplies Will Be at Bellevue Stratford, May 17-19

Exhibitors — Booth No.

Abbott Laboratories .....53 & 55
Air Reduction Co., Inc.....13 & 15
Air Reduction Sales Co.
Ohio Chemical & Surgical Equip. Co.
Pure Carbonic Co.
Aluminum Company of America ..24
American Can Company 45
American Food Laboratories, Inc..68
American Optical Co. 67
A.P.V. Company, Inc. 26
American Sterilizer Co. .....28 & 29
Atlas Powder Co. 41
Bausch & Lomb Optical Co. 12
Blaw-Knox Co. 92
Brabender Corp. .....86 & 87
C. W. Brabender Instruments Inc. .18
Calgon Co., Div. of Hagan Chemicals and Controls, Inc. ...61
Chain Belt Co. 7
Clinton Corn Processing Co. 23
Continental Can Company, Inc. ...36
Corn Industries Research Foundation, Inc. .....73 & 75
Crest Foods Co., Inc. 72
Crown Cork & Seal Co., Inc. 19
Curtiss-Wright Corp. 95
Diamond Crystal Salt Co. 22
Dodge & Olcott, Inc. .....14 & 16
Dow Chemical Co. 65
Eastman Chemical Products, Inc. .66
Evans Research and Development Corp. 42
Felton Chemical Co., Inc. 48
Florasynth Laboratories, Inc. .1, 3 & 5
Food Machinery & Chemical Corp. 58
Food Materials Corp. 88
Fries & Fries, Inc. 76
Fritzsche Brothers, Inc. .....70 & 71
Givaudan Flavors, Inc. 57
Griffith Laboratories, Inc. 69
Groen Mfg. Co. 44
Gunther Products, Inc. 27
Hercules Powder Company, Inc. .. 9
Hoffman-La Roche, Inc. 47
International Flavors & Fragrances, Inc. .....62, 63 & 64
Polak & Schwarz, Inc.
Van Ameringen-Haebler
Kelco Company 37
H. Kohnstamm & Co., Inc. 35
Kraft Foods 8
L. E. E. Inc. 94
Arthur D. Little, Inc. 51
Manton-Gaulin Mfg. Co., Inc..... 2
Marine Colloids, Inc. 59
Merck & Co., Inc. .....50 & 52
David Michael & Co., Inc. 38
Majonnier Bros. Co. 74
Monsanto Chemical Co. 56
Morningstar-Paisley, Inc. 82
Morton Salt Co. 46
Norda Essential Oil & Chemical Co., Inc. 90
Henry H. Ottens Mfg. Co., Inc. ...80
Patterson-Kelley Co., Inc. 4
Penick & Ford, Ltd., Inc. 39
Pepsi-Cola Co. 89
Chas. Pfizer & Co., Inc. 43
Polak's Frutal Works, Inc. 25
Proctor & Schwartz, Inc. 17
Quaker Oats Co. 54
Radio Corporation of America ...20
Riegel Paper Corp. .....77 & 79
F. Ritter & Co. 21
Rohm & Haas Co. 11
Schimmel & Co., Inc. 85
Wm. J. Stange Co. 60
Sterwin Chemicals Inc. 40
Sugar Information, Inc. ....32 & 34
Takamine Laboratory, Div. of Miles Lab. Inc. 33
Ungerer & Co., Inc. 93
U. S. Stoneware Co. 78
Vanilla Laboratories, Inc. 10
Wallerstein Co., Inc. 6
Warner-Jennison Mfg. Co. ..30 & 31
R. D. Webb & Co., Inc. 84
White Cap Co. .....81 & 83
Wisconsin Alumni Research Foundation 91
Wyandotte Chemicals Corp. 49

BLUEBERRY PRESERVES AND SYRUP are being filled into Hazel-Atlas jars and bottles, and the latter go into cases, in this family-style kitchen. Mrs. Doris Skorseth, center, is flanked by two of the team of seven Skorseths who work in the firm—her daughter-in-law Ellen and her son David. Their story is one of how . . .

Home Preserved Wild Fruit Jellies Build a Business

Lakeview Berry Farm of Minnesota now also packs syrups, preserves, pickles

By Doris Skorseth

We got into the business of making jelly to sell as the result of a tornado.

In late April of 1951, our little 30-acre ranch a mile out of Park Rapids, Minnesota, was for sale. A prospective purchaser stopped in one day, looked Lakeview Berry Farm over and, in less than an hour, decided to buy the place. He agreed to return in a week to complete the sale. Meanwhile we were to prepare to move, as he wanted immediate possession.

Four days later a freak storm struck our neighborhood and, in a matter of minutes, had uprooted trees, tumbled small buildings, and (worst of all) had changed the mind of our prospective buyer about going through with our deal. Although we grew gladiolus, strawberries and raspberries commercially, the income was not enough for our needs, and my husband Sigurd and I were of an age where it was no longer easy to obtain outside work, or stand up under its strain. And we were in debt. What could we do?

It was at this point that we thought again of a question which had been asked by summer visitors to our area in the past. We are located in the region of the Itasca State Park, and thousands of tourists travel past our house each summer to visit the headwaters of the Mississippi. These travelers often stopped to purchase our fresh berries, and some of them had inquired if we ever made jellies to sell.

Tourists Suggest Answer

That was something we hadn't considered, with the many brands already on grocers' shelves, but in the summer of 1951 we were ready to try anything. So we made up some raspberry and strawberry jellies and preserves, for customers who gave us an order in advance. Before the vacation season was over, we knew that this was opportunity knocking on our door.

As orders came in from more and more folks, we began to try to make up some preserves in advance, to keep up with the demand. That turned out to be a bigger job than we had ever dreamed of. And on top of it, several times a day someone was sure to ask us: "Don't you make any other kinds beside strawberry or raspberry? We have those ourselves; we'd like something different, something we don't have at home."

We Tackle Wild Fruits

We pondered on a possible answer to these requests for days, and kept coming back again and again to one thought: Would they like the jelly we make out of our local wild fruits?

I had a few quarts of choke cherry, pin cherry and wild plum juices in our basement—not much, but enough for a test. So, late in the season, I made a few jars of jelly and introduced them to our customers.

The reaction was interesting. Only occasionally did we find someone who had known these fruits before, and most of our visitors hesitated to buy something with which they weren't acquainted.

To overcome this obstacle we began to insist that prospective buyers open a jar and taste the jelly. At first there was resistance to this also, but we made it clear that they weren't obligated to buy, and then we began to enjoy ourselves. Their exclamations were thrilling to listen to, and not more than one or two out of twenty-five failed to like the wild varieties.

Our Business Booms

In 1952 we resolved to try to keep a supply of our new line on hand in our roadside stand, but a letter we received that summer forced us to alter our plans considerably.

The letter was addressed: "The place that sells jams, jellies and berries, on Highway 71, north of Park Rapids, Minn." Since our labels had never had our name on them, this was the best our customer could do. The address was so unusual that I sent the letter to George Grim of the Minneapolis Tribune, with one of my own explaining how we came to receive it.

Mr. Grim gave the story a column in the Sunday paper—and that very day, before we had seen a copy of the article ourselves, cars began to pour in to our place, full of people who wanted to see the shop he had described. Hundreds and hundreds more came during the rest of the summer, proving to us that we really had something to offer that folks really wanted.

But you don't contract for wild fruit as you do for domesticated varieties. And we would need a lot of it, in the coming year, judging from the letters we were receiving from satisfied purchasers, and the comments of visitors. We had to have a plan for securing our raw materials—preferably a plan

which would give us supplies before the new crop ripened.

We Outgrow Our "Factory"

So, in early 1953 we began inquiring of our neighbors if they had any jars of wild fruit juices we could buy. I was happily surprised to discover that there was a considerable amount available—in fact, these women were pleased to learn that they had an unexpected source of pin money hidden away in their pantry shelves.

We then went to the bank and explained that we needed money to buy these juices. Our banker loaned us the necessary funds, Mrs. A told us about the supplies of juice that Mrs. B and Mrs. C had, and so we obtained enough to keep us going throughout the season. By the end of the summer we knew that our home kitchen could no longer satisfy the trade we had achieved.

With the aid of the regional inspector for our state's Dairy & Food Administration, we planned a new processing kitchen to be built next to our home. Again we borrowed, this time for the building materials, and Mr Skorseth, a carpenter, put up the structure.

It was fortunate that we enlarged our capacity, for in 1953 a Minneapolis food distributor came to us with a plan to sell our products throughout the vacation areas of northern Minnesota, Wisconsin, Michigan, South Dakota, etc. He soon had over 200 accounts stocking our foods.

Getting Raw Materials

The next year our eldest son, David, and his wife became partners in our enterprise. In that season, also, we solved the problem of how to obtain regular supplies of our wild fruits.

We sent out letters to church ladies aids, veterans organizations, 4-H clubs and other groups we thought might be interested in earning some money. And we advertised in more than a dozen rural newspapers. To everyone who replied we sent detailed instructions on what kinds of fruit we wanted, and on how to process them into juice and pack it uniformly in quart jars.

In 1955 we bought 20,000 quarts of wild fruit juice, paying out about 25 times what we had invested for raw material the first time we had purchased any in this form. Since then we have continued this method of procurement, often receiving supplies from as far as 175 miles away.

By that year we had broadened our line considerably. In addition to our original wild packs—choke cherry, pin cherry and wild plum jellies—we had added wild blueberry, highbush cranberry and wild grape jellies and preserves. We had also introduced wild fruit syrups, and found that they met with a popularity which exceeded our greatest expectations.

Progress To Date

In the last three seasons, we have added still more to our activities. One item which is proving popular is a wild rice pancake flour, as a companion to our syrups. Our most recent addition is a line of pickles and relishes, since there seems to be a demand for these home-made products. However, we have not got set up for "volume" yet in the pickle department.

We also are developing quite a business for our jellies and syrups in putting up Christmas gift packs for industrial buyers. Businessmen on vacation saw our products, and one day one of them said his company usually spent a good deal for holiday presents to be sent its customers, and might like to give them our fruits if we could supply them. We decided to try, and I guess the manager liked the effort, because he came down and got a whole station-wagon load.

Just as the wild plum crop was ripening a year ago last fall, we received an order from another company for a thousand cases of wild plum jelly. We put an ad in the paper asking for plums, but got little response. Then we changed our tacties, and aimed a second ad at the housewife, asking if she could use $5, $10 or $25 in the next two weeks. We invited her to bring us canned plums, plum juice or plum pulp, and also fresh raw plums. This did the trick; we were swamped with plums, and were able to complete the order with ease.

While we still try to keep this a family operation, we have grown to the point where we have to employ some of our neighborhood women to help on production during the season peaks.

The Future

What lies ahead is difficult to predict.

We hope some day to be able to install freezing equipment and an insulated storage room, to simplify the work of holding our raw materials, and to increase the quantities we can handle.

Even without this, we have increased our business from a first-year gross of less than $1,000 to a point where our sugar and fruit alone cost us ten times that much. And some season soon we hope to double the 1958 volume.

We hope this will be the case, not only for the sake of our little family business, but also for the other local people who gather the wild fruits for us. This is not a "money" country, and the average citizen finds he has quite a struggle earning what he needs to live. This enterprise, then, is utilizing one of our natural resources, and thus is increasing the buying power of our region.

FOUR WILD FRUIT jellies and jams, and two wild fruit syrups, from the Wild Fruit Pantry. Containers are by Hazel-Atlas, and the syrups have cellulose-band seals over the screw caps.

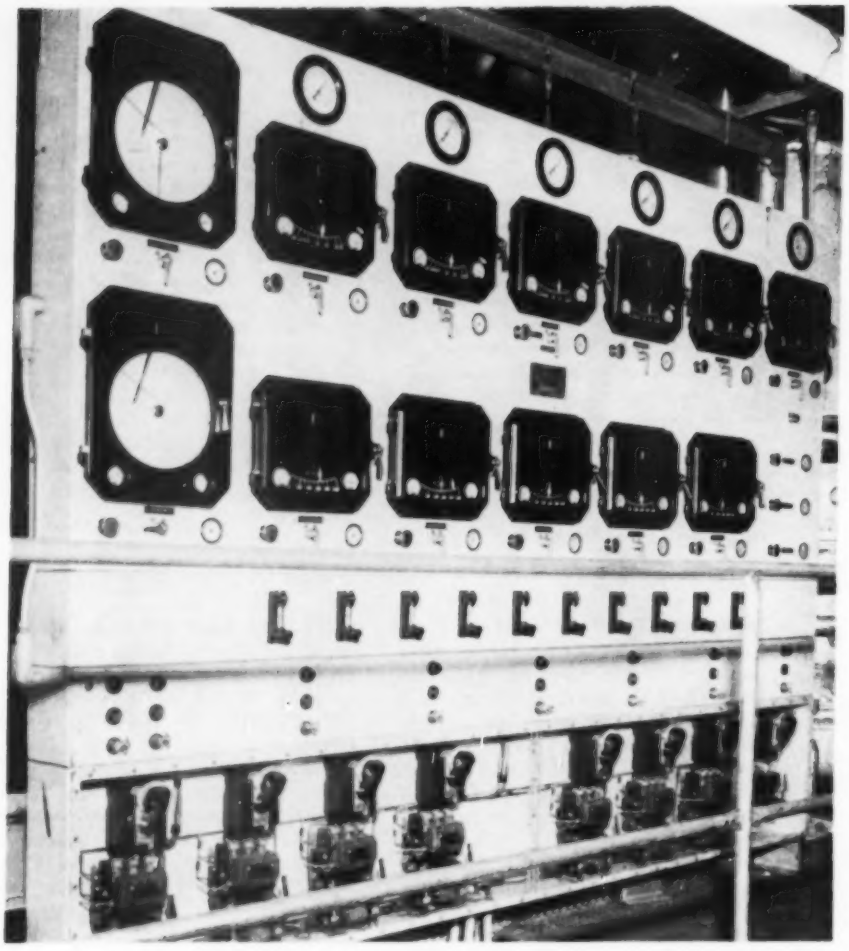


FIG. 12. Panel of instruments designed by Thermovar, Inc., for tomato products operations at a plant of Contadina Foods.

INSTRUMENTATION in Food Products Manufacture

By HERBERT ROEMER

Taylor Instrument Companies

Part I of this thorough report on instrumentation in canned, dry, frozen and glassed food plants appeared in the April issue of CANNER/PACKER, and was concerned with the uses and types of instruments. The current report covers selection and application of such equipment.

SELECTION AND APPLICATION

Selection of control instruments or systems for a specific application is beyond the scope of this article. Twenty years ago, selection of an instrument was by rule of thumb. The procedure on a new or unknown process was to start with the simplest applicable instrument and then add to or change until desired results were produced. An alternative was to start with a more complex type of controller and use only required features.

Today there is a considerable amount of information published on automatic control, and reference to these sources will reveal that the proper selection of automatic control takes into consideration such things as load changes, time lags, transportation lag, transfer lag and valve characteristics. Unless prospective purchasers of instruments are versed in the theory of automatic control it would be well to confine decisions to basic types of instruments, the range over which a given variable is to be measured, the accuracy with which it must be measured or controlled and special requirements for materials which come in contact with products.

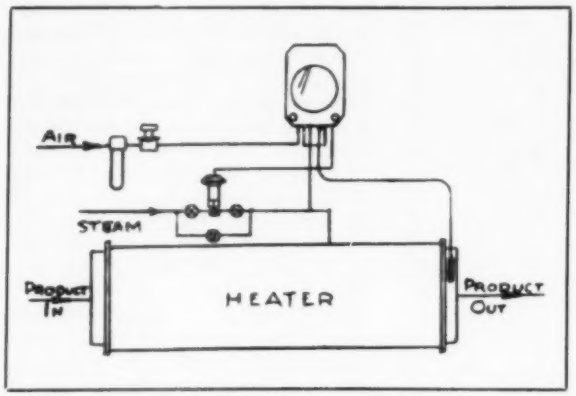


FIG. 13. Automatic control system for tubular heater.

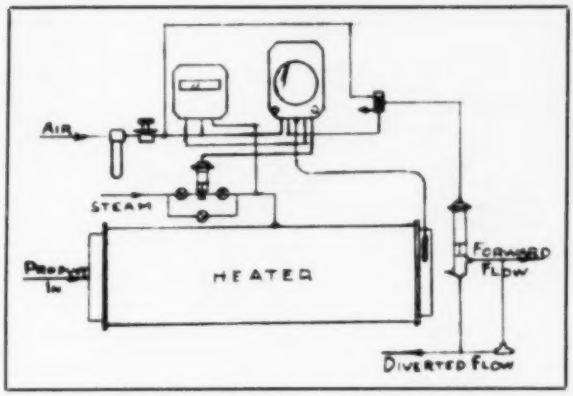


FIG. 14. Tubular heater control system with pressure override and diversion valve.

A reputable instrument engineer can recommend the proper control system.

Certain fundamentals apply for most control applications. When controlling equipment which operates under pressure—such as a retort or shell and tube heater—it is generally good practice to use a valve of the air-to-open type. In the event of failure of operating air pressure, the valve would close. Equipment such as open cookers and blanchers are usually equipped with air-to-close valves. Air pressure failure opens the valve, which does no harm other than blow steam to atmosphere, avoiding processing losses.

The action of the controller-valve combination is determined by application. Having selected the desired valve action, the controller action must be such that the combination of controller and valve will get the desired result. The action of the diaphragm control valve is usually determined by the construction of the valve body and is not readily changed in the field. The action of modern control instruments, whether indicating or recording, can be changed in the field without the addition of any parts.

There are many typical control applications in the food industry which use standard instruments and are repetitive in nature. There are many applications wherein the control system is designed by an instrument company engineer to achieve desired results. Juice heaters for continuous processors and canning retorts are examples of repetitive applications. However both of these pieces of equipment must have instrumentation designed in accordance with individual processing problems.

Shell and Tube Heaters

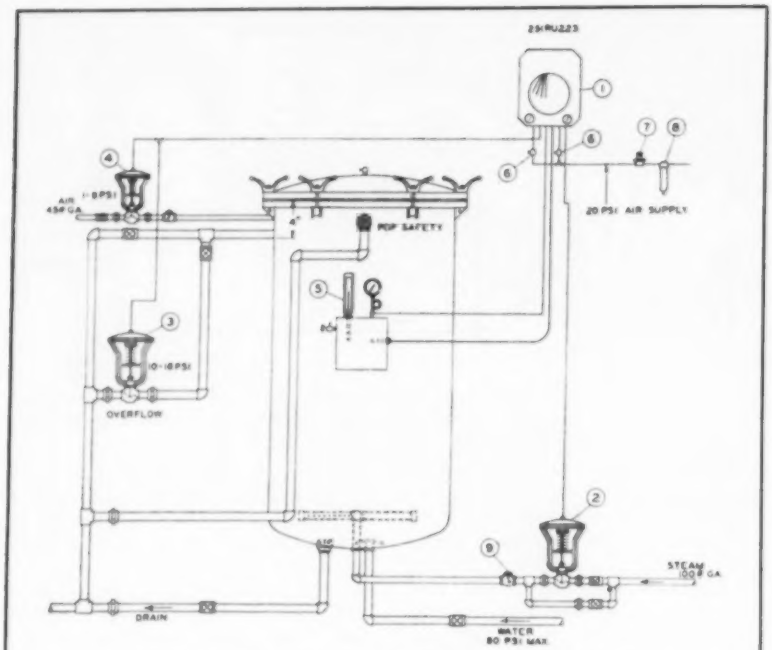
Consider as a typical example: automatic control of a heat exchanger, such as a shell and tube heater. A heater of this type may be used for anything from preheating a product to raising its temperature to pasteurization or sterilization of products where exit temperatures must be held within close limits. The automatic control of the shell and tube heater can vary from a simple non-indicating or even self-acting type of temperature controller, to the more complex system which not only controls temperature within close limits but also serves to divert flow of product which is below that temperature. Instrumentation is entirely dependent upon results which are desired.

Figure 13 illustrates one of many systems of automatic control for tubular heaters. This system involves a combination temperature-pressure controller. The temperature bulb controls steam to the heater based on the product leaving the heater. The pressure controller is a simple on-off type of control which overrides the temperature control in the event pressure on the shell exceeds the desired maximum. It is often desirable to have protection against excess steam in the heater in the event of interruption of product flow. This can be accomplised by the addition of a pressure switch in the product line which automatically shuts off the air supply in the event of product pressure loss, causing the steam valve to close.

Figure 14 shows a system of control which includes a pressure override feature as well as control of a diversion valve to divert the flow of product when the temperature leaving the heater is below the set minimum. This system is used on heaters to insure a given product temperature going to a filler bowl. Other variables, such as supply tank level or filler bowl level, are also tied in with flow diversion valves.

The basic function of supply tank level is to insure that product is available to be pumped through the heater. The level control on the filler bowl functions to prevent product from overflowing the filler bowl. Another common application of instruments to heat exchangers is that used on high-short heating-cooling systems where a product is brought to a high temperature, held for a period, then cooled below the flashing point but still hot enough to produce sterilization of containers. Flow diversion of product is important in this process. The temperature must be measured and controller at the outlet of the heater section to insure a sterilization. Temperature is also measured and controlled at the outlet of the cooler to insure that product is hot enough to sterilize containers and produce vacuum after cooling. Since many products are sterilized above flashing temperature it is not practical to install a flow diversion valve at the outlet from the heater unless the product is run to a cyclone or disengaging chamber before return to the supply tank. One flow diversion valve is used at the exit of the cooler, and controls are arranged so either a low temperature out of the heater or a low temperature out of the cooler will divert the flow of product back to the supply tank.

For complete protection it is necessary to insert a time delay mechanism in the controller line from the heater section that operates the flow diversion valve. Let us assume that we are sterilizing a product at a temperature of 270° F. If this temperature should drop below 270° at the outlet of the heater, the flow diversion valve will immediately assume the diverted flow position. The fact that the product which is in the holder section and in the cooler section is diverted is of little concern. However, if the temperature remains below 270° the holder and the cooler will fill up with unsterilized product. When the temperature again gets to 270° closing of the flow diversion valve must be delayed long enough



1—251RU123 RECORDING TEMPERATURE AND PRESSURE CONTROLLER		
RETORT SIZES 42" x 48"	42" x 72"	42" x 96"
2—4VB131	5VB132	6VB132
3—7VB112	7VB112	7VB112
4—3VA211	3VA211	3VA211
5—11ET310 INDUSTRIAL THERMOMETER 170° TO 270° F. & P.		
6—	¼" PETCOCK	
7—41S323	RED. VALVE	
8—88S17	AIR STRAINER	
RETORT SIZES 42" x 48"	42" x 72"	42" x 96"
9—1" CHECK	1¼" CHECK	1½" CHECK

FIG. 15. Steam-cook, pressure-cool retort instrumentation.

to empty the cooler and holder section of unsterilized product.

In food processing plants, heat exchangers are responsible for much erroneous criticism of instrumentation. It might be well to consider some common troubles with this equipment not related to instrumentation.

If the heat transfer surface in a heater is adequate, and product temperature leaving the heaters falls below desired levels the following source of difficulty may be checked:

1. Build up of solids on the heat exchange surfaces can reduce the heat transfer rate rapidly. The remedy is to remove the material mechanically or by chemical action.

2. Steam traps are not allowing condensate to leave the shell as formed. The remedy is to repair or replace the trap. Temporary relief is secured by cracking a by-pass.

3. Accumulation of non condensibles in the shell interferes with heat transfer. The remedy is a bleeder valve to remove condensates effectively from the shell.

Retorts

Pressure retorts are used for sterilizing in hermetically sealed containers products for which the sterilization temperatures exceed the boiling temperature of water at atmospheric conditions. Operations of these retorts is regulated by state laws where hazards of botulinus infection exist.

To prevent overcooking or under sterilization, it is necessary to maintain temperatures, pressures and time of cook within narrow limits.

Canned vegetables, meat, fish and other low acid foods are processed in retorts. Retorting is classified as three types: steam cook, steam cook with pressure cool, and water cook. The retort is loaded, the cover sealed and brought up to the cooking temperature and held for the proper length of time. Cans are cooled directly in the retort or removed and cooled by spraying or submerging in water. Steam is introduced into the retort usually through a perforated distribution pipe. Dry steam cook is a process which has a large heating capacity and small time lag. Unless he pays strict attention to one or two retorts, an operator cannot manually control the temperature of a retort operating under these conditions. Fluctuations in boiler pressure and changes in air currents surrounding the retorts are reflected by changes in retort temperature. Automatic temperature control systems maintain correct temperatures more efficiently and more accurately than can be accomplished by hand control.

A typical application for a retort using steam cook consists of a recording temperature controller of the air operated type and a diaphragm valve on the steam line. This not only controls the temperature but produces a written record of temperatures and time. These records are the canners' assurance that each batch of product has been properly processed. Should spoilage occur at a later date, reference to the graphic record will dispel any question as to whether the product was properly processed, and will save time and expense in placing responsibility where it belongs.

Self-acting temperature or pressure controllers for retort control are now considered obsolete by modern canners. They are classed as low sensitivity controllers which require a comparatively large change in temperature at the sensing element to cause the steam valve to move from fully open to fully closed. This causes temperature drifting during the control period. Because the self-acting controller has limited power, the danger of sticking valves and sluggish operation from scale accumulation are present. Control of retorts on a basis of pressure has also been discarded. While it is true that under standard conditions a given gage pressure of saturated steam will produce a certain temperature, this temperature will vary at different elevations, and with conditions in the retort. For example, air in the retort might give a pressure reading corresponding to a temperature of 240° F, while the actual temperature would be considerably less.

With the minimum amount of instrumentation, the operator must time the length of cook and shut off the steam when proper cooking time has elapsed. The retort is then opened, cans are removed and cooled. This type of retort control is applicable only for small cans (that is, No. 2 or smaller).

When larger size cans are used, it is necessary to maintain pressure outside of cans while cooling. This is retort steam cook with pressure cooling. In the "steam cook pressure cooling" process, at the end of the cooking cycle air is admitted to the retort to maintain the pressure that was caused by the steam during the cooking period. As the retort is filled with water, there is a tendency for the pressure within the retort to increase above

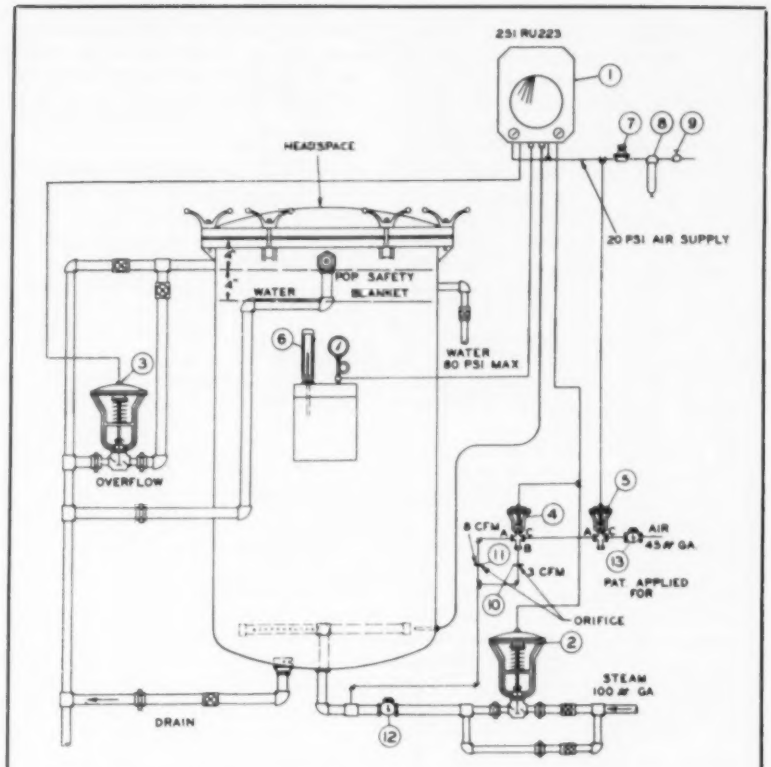
the desired value and therefore, a means must be provided for relieving excess pressure. Excess pressure during cooling will collapse the cans. The conventional method of control is by using a pressure controller operating two valves, one on the air line going into the retort, the other on the relief line. Figure 15 shows typical instrumentation for a steam cook pressure cool retort. The air make-up and relief valve are designed to operate on a staggered basis. If pressure falls below the desired value, the air valve will open, increasing pressure. If the pressure goes above the desired value, the relief valve opens to reduce pressure to that which is required.

With the steam cook, pressure cool system as with the plain steam cook system it is desirable to automatically time the cook by the addition of a process timer incorporated in the recording-control instrument. The process timer may be used automatically to shut off the steam at the end of the cooking time. It might also automatically turn on a cooling water valve, at the same time opening an overflow or drain valve. It might also be used automatically to inactivate the temperature control system and to energize the pressure control system for the cooling cycle. In this type of control system, the operator is relieved of all duties from the time steam is turned on at the beginning until the cans are sufficiently cool to be removed from the retort.

Non-acid foods in glass are sterilized while submerged in water in pressure retorts. Steam and air are used to maintain sufficient external pressure to over balance internal pressure and hold closures in place. A system for retorting glass containers is shown in Fig. 16. Separate recording controllers may be used for temperature (steam) and pressure (air). Or, in a simpler arrangement, air is admitted continuously and the excess is bled off to atmosphere to maintain the desired pressure differential. Air not only maintains the desired pressure differential but may also serve to agitate the hot water and maintain uniform temperature.

Automatic timing may be incorporated for the heating, cooking and cooling cycles or these may be controlled by an operator, who turns the steam on and off and turns on the cooling water, and opens the retort when cooling is complete.

Figures 17 and 18 illustrate a system for maintaining uniform temperature in continuously deep fat frying of potato chips. In this system, the oil is indirectly heated outside the cooking vessel, insuring against local overheating or scorching of either oil or chips, and protecting the cooking oil for a maximum period.



1—251RU223 RECORDING TEMPERATURE AND PRESSURE CONTROLLER		
RETORT SIZES 42" x48"	42" x 72"	42" x 96"
2—5VB132	6VB132	6VB132
3—7VB212	7VB212	7VB212
4—2VJ140	2VJ140	2VJ140
5—2VB140	2VB140	2VB140
6—11ET310 INDUSTRIAL THERMOMETER 170° TO 270° F. & P.		
7—41S323	RED VALVE	
8—89S17	AIR STRAINER	
9—¼"	PETCOCK	
10—3 CFM	ORIFICE	
11—8 CFM	ORIFICE	
12—2" CHECK		
13—¼" CHECK		

FIG. 16. Instrumentation for retorting glass containers in water.

INSTRUMENT INSTALLATION

Instruments should be installed where they are protected against dirt, dust, process product, grease, oil, water, etc. They should also be protected against excessive vibration or shock, which may cause misalignment and maladjustment and wear. It is better practice to mount an instrument on a wall panel or pedestal connected directly to the floor than to fasten it on a vibrating machine.

Instruments using compressed air as an operating medium should be connected with copper tubing rather than iron pipe between the instrument and the controlled device. Over a period of time iron pipe will rust on the inside due to moisture in the air. This rust finds its way into the instrument, causing it to become inoperative. A control instrument can function properly only if the sources from which it draws are dependable. There must be an adequate supply of steam, water, compressed air, electricity or any other factor which enters the process.

Air operated control valves are usually supplied with an arrow, indicating the direction of flow through the valve. In the absence of any marking, it should be remembered that the operating medium must flow through the valve in such a manner that its pressure tends to *open* the latter. This may mean that the high pressure line is connected to the stuffing box side. This prevents the valve from slamming shut as the disc approaches the seat.

In the installation of any control

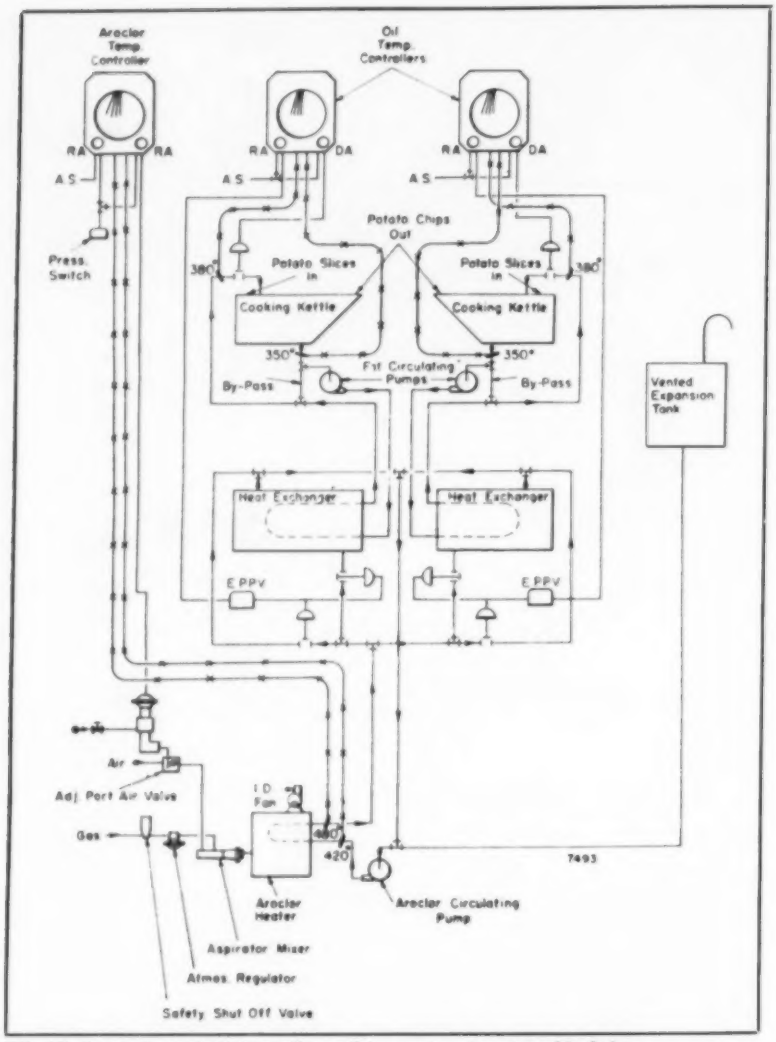


FIG. 17. System for maintaining uniform oil temperature in potato-chip frying.

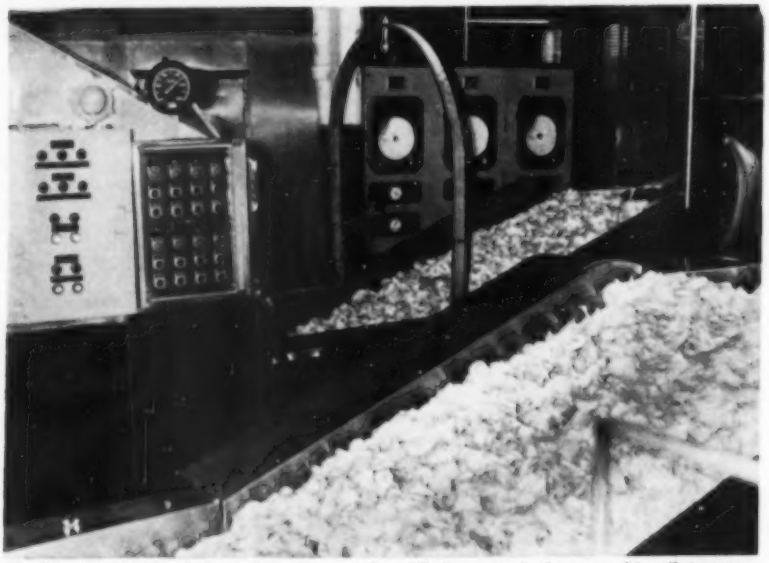


FIG. 18. Application of the system shown in Fig. 17, for control of potato-chip oil temperature, in the plant of Nicolay-Dancey, Inc.

system using an air or water purge, such as is used for level and density measurement, it is imperative that all connections in the purge system be absolutely tight. Where pipe connections are made, pipe dope should be used. This is particularly true when employed on vacuum service—as on a liquid level controller on a vacuum pan using a water purge system. A very small leak in the connecting piping will suck air into the water, causing the instrument to read incorrectly.

Proper connection of the sensing element of an instrument is essential. In the case of a pressure instrument, which is mounted lower than the point of measurement, it is important to keep the operating medium out of the connecting line. Provision should be made to keep this line clear of the measured medium (or let it fill the line and then recalibrate the instrument, allowing for the pressure caused by the hydrostatic head of material in the line). Frequently, pressure instruments are connected with an air purge to keep the connecting line clear.

On temperature measuring instruments proper bulb immersion is of paramount importance. It is necessary that all of the temperature-sensitive portion of the measuring element be well immersed in the product being measured. If the temperature-sensitive element is too long to fit into an existing line it should then be installed at a bend in the pipe so that full immersion can be obtained. Accommodating a bulb which is too long by adding a bushing or thimble which leaves part of the bulb in a dead-pocket is poor practice. The bulb should always be installed so that it is continuously flushed by the product being measured.

OPERATION AND MAINTENANCE

Instrument maintenance is primarily a matter of common sense. Instrument users who change motor oil every 1000 miles and get their watches cleaned every year, may not give this attention to instruments. This gives rise to the familiar picture of a dismal looking controller hanging on the wall, "tarred with oil" and "feathered with dirt."

The average food processing plant does not have enough instrumentation to warrant an instrument department or full time instrument maintenance man. Servicing of instruments and control devices is many times relegated as follows: (1) if it has a valve on it, it is the plumber's headache; (2) if it has wires going through it, see the electrician; (3) if it has no valves or wires, it is the foreman's job; (4) call the

instrument company. Instrument adjustments are not complex and a small amount of training is all that is required for anyone to know how to make simple adjustments. Most of the major instrument companies hold maintenance courses periodically and any plant using instruments should have at least one man trained on instrument maintenance.

Checking Instruments in the Plant

To check a mercury in a glass thermometer for accuracy, immerse the entire stem in an agitated water bath, together with an etched stem laboratory thermometer of known accuracy. The bath should be vigorously agitated for at least one minute before comparing the two thermometers. If the temperature at which the thermometer is to be checked is above 210° this checking must be done in an oil bath or pressure-tight container using steam as a medium to heat bulbs of both thermometers.

It is good practice to use a checking thermometer, with finer graduations than the thermometer to be checked. If it is desired to check a thermometer within 1° F, the test thermometer should be graduated in one fifth degree divisions. In checking a long stem thermometer, care must be exercised to make the test at the same stem immersion as that at which the thermometer was calibrated.

Another point to watch in checking long stem thermometers is what is called the bulb conduction error. In spite of all the care which is taken in the manufacture of these thermometers to insulate the bulb from the metal stem, there always remains a tendency for heat to flow from the bulb up the stem and be radiated to the atmosphere. This conduction error will be greatest when the stem is cold, as the heat is readily absorbed by the metal, and therefore a long stem thermometer should be left in the agitated bath long enough for it to come to the temperature at which it will be used under operating conditions.

Scale position readjustment on a good industrial thermometer is rarely necessary once the instrument has received its final factory test. If, however, testing reveals that the thermometer is inaccurate, a correction can be made by readjusting the metal scale. In most cases where inaccuracy is found, either the glass tube is broken inside the metal housing or the mercury column has become separated. In rare instances the packing may loosen, allowing the tube to slip from its calibrated position. Separated mercury columns can best be joined by immersing the bulb in a liquid well below the lowest point on the thermometer, which will cause all of the mercury to go into the bulb where the mercury will be reunited.

Checking Recorders

In checking a recording thermometer for accuracy, the bulb is put in a test bath (unless it is possible to use the apparatus itself for checking), making sure the test thermometer is located adjacent to the bulb of the recording instrument.

A recording thermometer should be checked at at least two points in its range. If it is found that the instrument is adjusted to read correctly at a low point on the chart and does not read correctly at a point near the upper limit of the chart, the instrument is said to be out of calibration. When this condition is found, unless the plant has a man who has been trained in "what to touch and what not to touch," it is recommended that the instrument be returned to the manufacturer for adjustment.

If the recording pen does not move when the temperature at the bulb is changed, it may be caused by leakage of the actuating medium. Sometimes the leak is so small that the instrument continues to operate for a period of time but gives inaccurate readings. If the thermal element becomes inoperative, it should be returned to the manufacturer for repairs. Modern recording instruments are so designed that a thermal system can be pre-calibrated at the factory and installed by the user at his plant. In this procedure, it is necessary only to make the proper mechanical connections and then set the pen to read accurately at one point on the chart. Readings throughout the rest of the range will then be correct.

The chart-driving mechanism in a recording instrument may either be electric or spring operated. Electric chart-drive mechanisms require essentially no care. Spring-driven chart mechanisms are simple clocks wound with a key. Commonest offense is winding too tightly. In case of a failure, they may either be returned to the factory for repair or sent to a competent clock and watch repair shop.

Controller Problems

When a controller has given satisfactory service, it is well, when something goes wrong, before concluding that the controller is at fault, to check for a possible explanation in some change that may have occurred which is outside the control system. Things which should always be examined are leaking bypass valves, improper air supply, obstructions in air supply lines, broken air supply lines, inadequate processing medium (such as steam, water) and faulty steam traps or condensate removal systems. On a new installation, make a thorough check of all piping or wiring connected with the control system to insure that the component parts have been installed in the proper manner. It is also good practice to isolate various units of the system, insofar as possible, and check each individually.

Routine checking of a pneumatically operated controller is usually confined to a few key points in the controller. Most pneumatically operated controllers have an air relay or pilot valve as well as one or more relatively small orifices. A common sourse of trouble is oil entrained in air supply to the controllers. This oil, originating in the air compressor, is carried in vapor form and the conventional filter will not remove it from the compressed air. Passing through a small orifice, there is a tendency for the oil to condensate, forming a gummy substance which causes malfunctioning of the instruments. The critical parts in control instruments should be cleaned periodically with a suitable solvent. As pointed out under recording thermometers, the pivot points or bearings should *not* be oiled unless specifically called for by the manufacturers instruction manual.

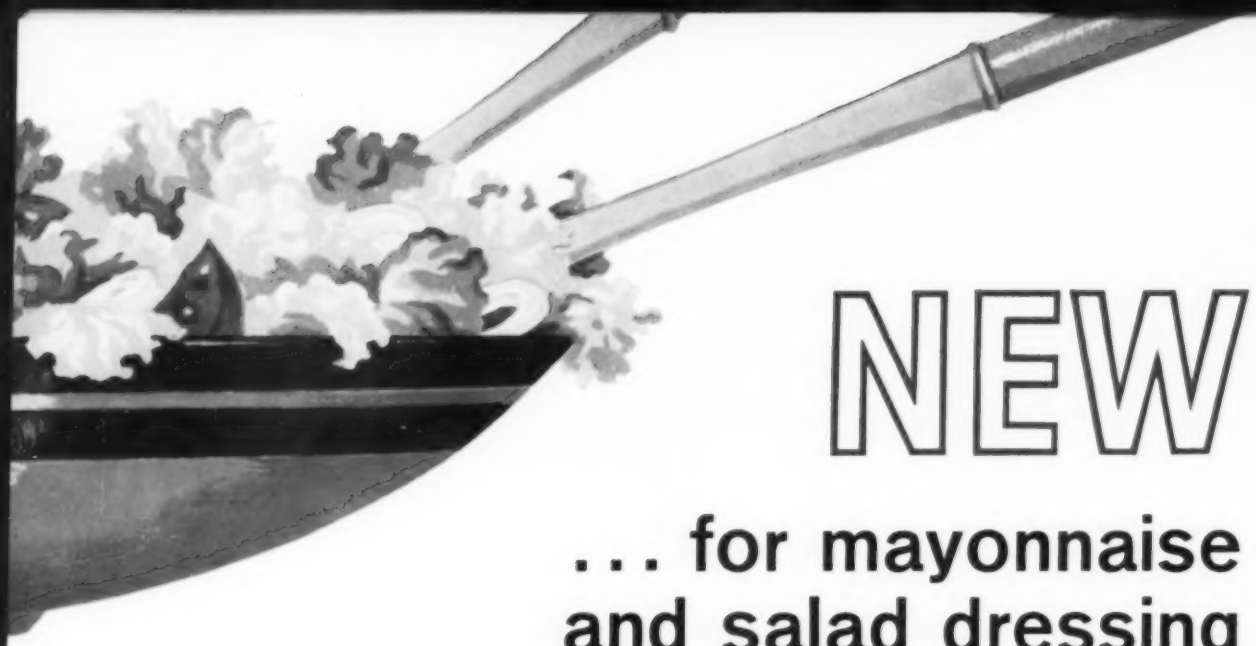
Second in importance only to the controller is the control valve, whether diaphragm or electrically operated. Because of usually trouble free performance and frequently inaccessible location, the control valve may be neglected in routine maintenance. A sticking valve stem may be caused by worn packing or by packing glands being tightened excessively. Foreign material lodging under the valve disc is not uncommon, particularly after there have been changes in piping and foreign material has gotten inside the pipe. The valve spring should be inspected periodically to determine that it has not rusted or deteriorated to the extent that it has lost its normal spring constant.

Key Factors

Some important points for care and maintenance of instruments include:

1. All facilities used in controller operation—such as steam, air, power and water—must be at their normal and proper values.

2. Control instrument and relative parts should be properly installed and connected to the measured system. If a temperature controller, the bulb should be properly installed to give proper



NEW

. . . for mayonnaise and salad dressing

Now—these key products, too, can GO MODERN, with the famous combination of ¼-turn opening and Vapor-Vacuum protection

There's been a big change in the packaging possibilities for mayonnaise and salad dressing. With the final perfection of a Vapor-Vacuum "Twist-Off" Cap especially for these products, a new vista has opened wide.

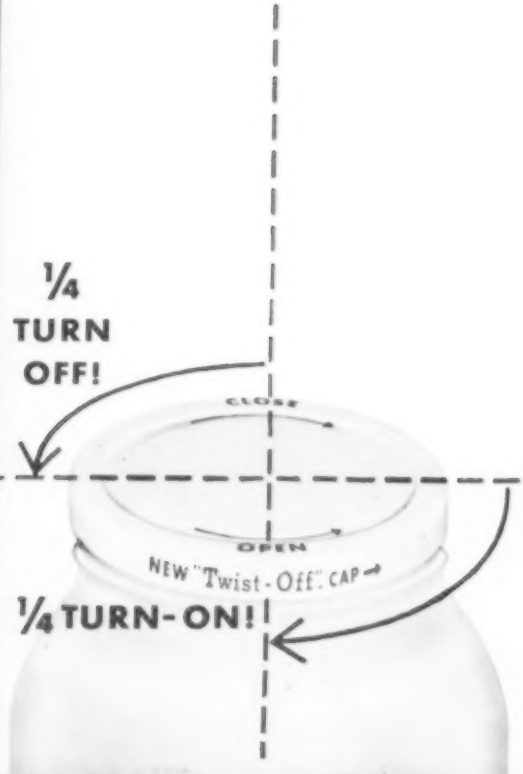
No longer will these delicate products have to depend solely on rapid turn-over to assure freshness. Now, they can have long-term protection, along with maximum convenience in use.

The Vapor-Vacuum Seal gives mayonnaise the finest long-range protection of freshness and flavor. It arrests the oxidation process which can lead to rancidity and flavor loss in oil-bearing food products. It increases shelf life far beyond previous levels.

The ¼-turn "Twist-Off" feature assures super-ease in use. It gives the mayonnaise package the same type of opening and re-sealing convenience which is now helping so many top brands of pickles, preserves, catsup, etc.

Result—a package which assures "seconds-old" flavor, puts a stop to returns, and makes the shopper happy.

With all these advantages available, mayonnaise packaging, too, is now due to go modern!



VAPOR-VACUUM® ¼-turn

"Twist-Off"™ Caps

WHITE CAP COMPANY

5-59 SUBSIDIARY OF CONTINENTAL CAN COMPANY

PACKAGE
VAPOR-VACUUM SEALED
fresh
SALAD DRESSING
NEW Twist-Off CAP

SPERGON®

SEED PROTECTANT

ROUTS SEED-KILLING FUNGUS!
Spergon seed protectant clamps down on "damping off" and seed decay. Poor, weak, young plants grown from unprotected seed result in lower profit returns because of poorer stands, lower yields. Treat the seed yourself in this pre-planting season or order Spergon-treated seed. Call your local supplier or United States Rubber Company, Naugatuck Chemical Division, Naugatuck, Conn.

United States Rubber

Naugatuck Chemical Division

5106 S. Elm Street, Naugatuck, Connecticut

producers of seed protectants, fungicides, miticides, insecticides, growth retardants, herbicides: Spergon, Phygon, Aramite, Synklor, MH, Alanap, DuraseL

immersion and minimize bulb conduction errors. The bulb should be located in a position to be subjected to an average temperature of the product being measured. In the case of pressure instruments, the pressure connection and the connecting lines must be arranged to preclude possibility of the line being plugged or filled with condensate or product.

3. Instrument should be mounted where it is not subject to excess vibration.

4. Avoid sharp kinks or bends on flexible tubing.

5. Do not wind the clock too tightly. Clock movements should be cleaned and re-oiled by competent clock repair men.

6. Be sure that the pen does not bear too hard on the chart. Pen pressure should only be sufficient for ink to flow.

7. When washing down equipment, do not turn water directly onto the case or housing of a control instrument. A splash proof cover over instruments is used to good advantage in many plants.

8. The diaphragm valve should be in operating condition and the stuffing box not too tight.

More Complex

Because of the increasing complexity of food processing, it is only natural that instrumentation becomes more complex. Even a relatively small processing plant may use control equipment more complex than can be maintained by a partially trained instrument man. For this reason, many plants are taking advantage of a service by the instrument companies known as protective service. This may take the form of scheduled calls by a service technician to check and adjust instruments on a contract basis (or it may be handled on an individual call basis in a seasonal industry to insure proper operation of control equipment just prior to the operating season). This service offers a happy solution to the plant which has seasonal operation and cannot support an instrument man or the plant which has only a minimum amount of control equipment.

It can be appreciated that considering the small time and effort expended in proper maintenance of instruments, the food processing plant will receive sizeable dividends through their continuity of performance. By keeping all equipment producing at 100% efficiency, not only will the need for replacement of equipment be minimized but the overall efficiency of operation of the plant will be greatly enhanced.

How New-type Instruments Improve Raw Tomato Grading

Present visual methods of grading processing tomatoes for color (No. 1 is 90% or more good color, seconds are 66-2/3% or more, balance are culls) are not adequate. They are affected by the inspector's memory or fatigue, by the fact that color is not consistent outside and inside. Also, since there are only three grades, sharp price changes occur among them.

A better system seems to be possible through use of a new tomato juice colorimeter. By this method, the inspector takes eight hampers or boxes from a load and makes these into several typical composite samples, one of which he grades. The sample used is divided into four classes visually—No. 1's, No. 2's, culls and a penalty group (fruit showing disease or other form of damage).

The usable tonnage is then determined by trimming the tomatoes in the lot, and crediting the grower with 100% of the weight of the No. 1's and the useful portions of the No. 2's, plus 80% of the useful weight of the penalty lot. The juice is then expressed from the tomatoes and checked on the new-type juice colorimeter, to rate the raw product on this phase of quality.

The penalty rating of 80% is an arbitrary one which seems to reflect a proper weighing of the value of that class of material. However, it can be adjusted by mutual agreement in an area or season where it does not apply satisfactorily.

—From report by Dr. A. P. Sidwell, U.S. Dept. of Agriculture, at National Canners Assn., Chicago, Ill., Feb. 19-24, 1959.

All-Male Asparagus

The New Jersey Asparagus Council has awarded a $6,000 grant to the New Jersey Experiment Station, Rutgers University, to experiment with inbred varieties and eventual cross-breeding through the development of an all-male strain. Previous investigation has found that because of the open-polination system of most asparagus fields, one third of the asparagus grown in New Jersey does not produce enough spears to show a profit.

Tree Fruit Harvester

Harvesting of prunes, plums and other small tree fruit is possible with a self-propelled catcher-conveyor. Speed is from 30 to 50 trees in an hour. Two of the machines, which were designed by Federal-State engineers of the U.S. Department of Agriculture, are used with a tractor-mounted tree shaker. Three men are needed to handle the three machines compared with seven or more men needed to handle old type fruit-catching frames and a tree-shaker.

Small, Uniform Potatoes from Gibberellin Seed Treatment

The "rest" or "dormant" periods of potatoes can be broken to produce faster growth with gibberellin. Gibberellin will reverse the tendency of potatoes, planted wide apart, to produce over-size tubers that won't grade out as number ones. With the use of the growth regulator, smaller potatoes can be produced even though wide planting distances are used.

The concentration of gibberellin on potato seeds should not exceed 5 parts per million. The right amount produces good results; however, the wrong amount can cripple a grower's crop.

There is a possibility that gibberellin may make potato plants more susceptible to the Rhizictonia fungus. Therefore, the gibberellin solution for dipping potato seed should contain fungicide.

—Herman Timm and Lawrence Rappaport, University of California, Vegetable Crops Dept., Davis, Calif.

Moisture-Proof Shipper For Eviscerated Fowl

A moisture-proof corrugated container has been developed for the shipment of eviscerated fowl to canners and other food processors. The container is known as the Control Pak, and is made by Stone Container Corp., of 4200 W. 42nd Place, Chicago.

The new container is impregnated with petroleum. It is stronger and lighter, sheds water, does not need separate lining paper, and insulates the birds during transit, according to the manufacturer.

Pea Vining in Plant Costs Less Than in Field

Costs of vining peas in the pea plant are generally less than field vining. Electric forks, feed regulators, and conveyor belts help economize on labor. In the field, workers are needed to receive, dump and clean pea lugs. In the plant, lugs are not used and conveyor belts do most of the work.

Costs of plant vining increase with longer hauling distance from the field. When hauling distances averaged five miles, a pea-freezing plant with an operating capacity of 20,000 lbs. of clean peas per hour can vine at the plant for a seasonal cost of $250,000. The cost of the same job done in the field would be $335,000.

At 20 miles, annual cost of plant vining was only $33,000 less than field vining. At 25 to 30 miles, costs were about the same.

—G. B. Davis and H. M. Hutchings, Oregon State College, "Costs and Efficiencies in Pea-Freezing Plant Operations—Vining."

Pallets Bins for Peaches—for Short Hauls, Anyway

Bulk handling equipment cuts down on labor and handling costs. But bulk bins are more likely to damage a fruit as delicate as a peach.

Two bulk bins will carry a ton of fruit, but it requires some 48 lug boxes to carry the same amount. Based on transportation costs of $8 a ton, the canner can save as much as $1.06 a ton per trip; almost $23 for a normal truck load of 22 tons.

The grower with a short haul is fortunate. If the peaches are hauled more than a few miles, possibilities for fruit damage increase.

In using bulk bins, forks on lift trucks should be at least 42 inches long to decrease damage to the bottoms of bins.

Fruit Shrinkage was greater in lug boxes than in bins, but was much reduced when the fruit was cooled.

—Michael O'Brien, University of Calif., Peach Day and Clinic at Davis.

New Variety Makes Top Tomatoes in Ohio

William and Leo Hoen of Maumee, Ohio, raised over 31 tons of tomatoes per acre on 25 acres. This was three times the state average and highest of producers in the 1958 Ohio Tomato Club, sponsored by the Ohio Agricultural Extension Service.

The technique of the Hoen brothers was to fertilize with 30 lbs. nitrogen, 130 lbs. phosphoric acid and 220 lbs. of potash per acre, before planting. The variety used was a relatively new one, Glamour. Plants were grown in local greenhouses and transplanted in mid May. Plants were spaced 28 inches apart in the row and the rows were five feet apart.

The Hoen brothers sprayed heavily. The field was sprayed nine times with Maneb, a fungicide to control various foliage and fruit rot diseases.

—Eugene C. Wittmeyer—Ohio State University Extension horticulturist.

Reliable!

TRANSISTORIZED

CONTROLLERS and COUNTERS

EMI

Now you can have controllers or counters which are virtually maintenance free, moisture and dustproof.

Use optical or proximity pick-up for counting or controlling.

For complete brochures and price information write directly to:

ELECTRO MECHANISMS, INC.
510 W. Ash Ave.
Fullerton, Calif.

PROCESSED FOODS

Good-sized Packs in Sight for U.S. in 1959 Season

Acreage and crop data from U.S. Dept. of Agriculture, import figures compiled by U.S. Dept. of Commerce, and pack information from associations and other trade sources indicate that the output of canned, dry, frozen and glassed foods in the United States will be of good size in 1959.

The over-all output of canned foods is expected to be slightly larger than in 1958. Practically every major dry food category will equal or surpass last year's production. Some frozen packs will be up from 1958, some practically unchanged, none smaller. Some items in glass promise to have moderately smaller packs, but the over-all total in jars and bottles should continue the steady growth characteristic of this industry.

Data on the various classes of commodities follow.

CANNED FOODS

Vegetables and Milk Down; Other Foods Gain

Fruits: Conditions in early 1959 promise good crops in major fruit-canning areas. Florida 1958-9 canned citrus fruit output is below the previous year, but the 1959-60 outlook is improved. Hawaii's canned pineapple pack is running slightly larger than that of 1957-58. Total U.S. canned fruit pack this year may be slightly above 1958, but total supplies will be little less, due to reduced carryovers.

Vegetables: Acreage of vegetables for canning in the U.S. will be smaller than in 1958, and the pack therefore should be reduced, although some individual items will show gains. Asparagus acreage for all uses is up 1%, and spring spinach yields are better than last year. But U.S. canning pea acreage is only 83% of the 1958 figure, potatoes (for all uses) are down to 93% and canning/glass-packing tomato acreage has been reduced to 86% of 1958.

Juices: U.S. supplies of canned and bottled juices and juicy-drinks will present a mixed picture in 1959. In citrus, the U.S. 1958-9 orange crop is up 16% over 1957-8, grapefruit is up 7%, but the lemon harvest has dropped 11%; in Florida, packs of grapefruit, orange and blended juices are running well below 1957-8, only tangerine showing a gain. Tomato juice is in good supply, but reduced acreage probably will cut the 1959 pack. The pack of prune juice, which apparently declined slightly in 1957-8, is being sharply curtailed in 1958-9 as a result of the very short 1958 California dried prune pack. On the other hand, Hawaii's pineapple juice pack is running ahead of 1957-8. And, most importantly, the 1958-59 pack of juicy-drinks (single-flavor and blended fruit ades, with added water, sweetening, acid, etc.) will undoubtedly far exceed the estimated 20 million cases packed in 1957-58.

Meats: With plentiful feed supplies, more livestock on feed the early part of this year than last, and more pig production expected in 1959 than in 1958, U.S. meats should be in plentiful supply this season, offering opportunity for a larger output of canned products. U.S. packs have been consistently going up; U.S. imports of canned beef have been declining, while those of pork have grown larger.

Poultry: The U.S. 1959 chicken crop is expected to be of normal size, and the turkeys up about 5%. The 1958 canned poultry pack was 16% over 1957, however, so the 1959 output may be of about the same size as last year.

Milk: Although production of fluid milk should be good in the U.S. in 1959, the canned pack is not expected to reverse the slight downward trend the industry has been experiencing in recent years.

Fish: Alaskan statehood may affect the U.S. salmon output in 1959, but other U.S. canned fish packs probably will be close to those of 1958, which were of normal size.

Others: Baby food data still remain unreported, either in tin or glass. Spaghetti and other paste packs are expected to continue their regular growth. Soup production and consumption also apparently are increasing steadily. Nationality packs (Chinese, Italian, Mexican, French, German, etc.) also are gaining in popularity, and the output should go up moderately this year. More production also is likely in convenience and gourmet items.

DRY FOODS

Record Production and Sales in 1959

Fruits: The U.S. 1959 pack should be larger than that of 1958, when the two big items—prunes and raisins—both had subnormal tonnages.

Vegetables: Acreage planted for

What's your harvesting problem?

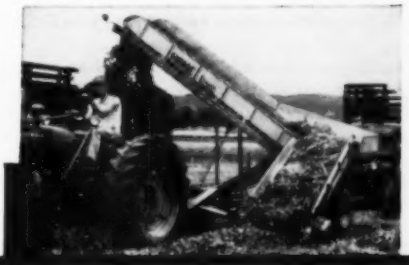
Hume harvesting equipment is engineered to help solve problems of cost, quality, speed and dependability.

MODEL "79" CUT-LODE HARVESTER: The ideal machine for those who require "once-over" harvesting of spinach, greens, green peas — converts to lima bean loader. Engineered to reduce overall weight, yet rugged and dependable under adverse field conditions. Easily transported.

HUME PUMPKIN LOADER: A practical, economical loader. Loads windrowed crop of varied size pumpkins, gently and cleanly. A pull-type machine, PTO driven, easy to attach. Machine raised and lowered hydraulically for easy field turning and road travel. ALSO NEW: *power-driven Pumpkin Windrower.*

HUME LIMA BEAN CUTTER: Cuts beans below crown to reduce pod damage — two rows at a time. Places vines in single windrow. Leaves excess roots and dirt in the field — provides you with a cleaner product at plant. Works with Model A Loader to cut-and-load in one pass.

TRACTOR-ROWER: A favorite among food processors for fast, efficient handling of tough heavy crops. Cuts and windrows in one operation — 7 or 8-foot cut. Mounts on almost any make tractor for all-weather harvesting.

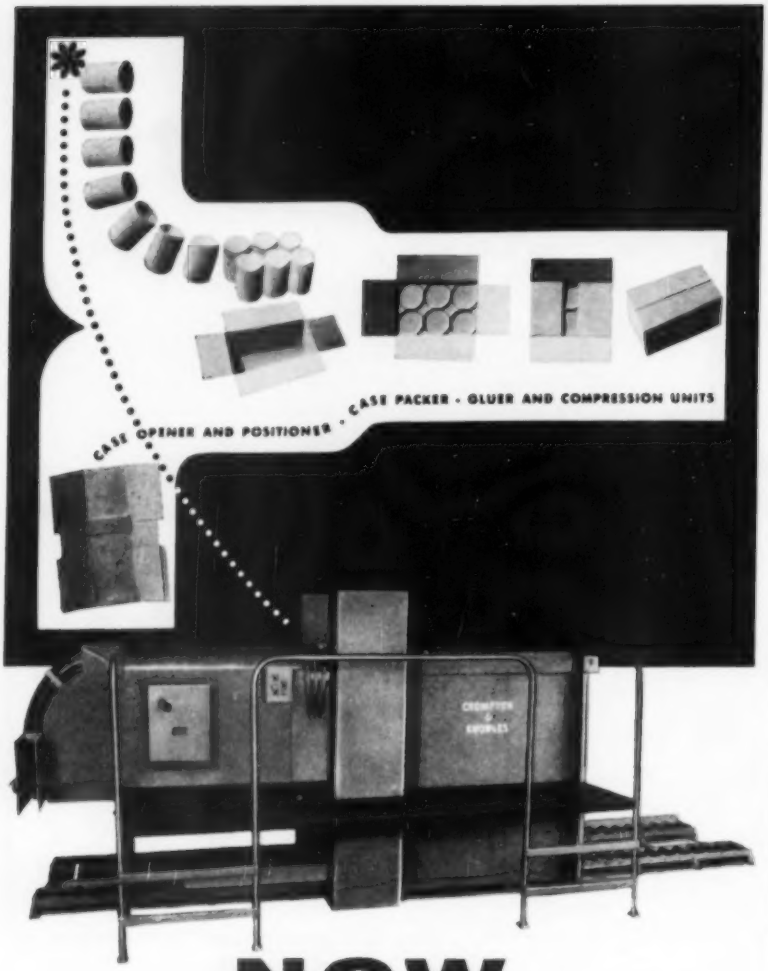


HUME

HUME GREEN CROP LOADERS: Fast dependable loading, even under difficult weather and crop conditions. Model M (left) also available with folding elevator. Model A (right) designed for easy road transport.

H. D. HUME COMPANY • **Mendota 1, Illinois**

BRANCHES: Hume Products Corporation, Mechanicsburg, Pa. Beaver Dam, Wis.



NOW...

The C & K Depalletizer

An Important New Addition to the C & K Automatic Can Handling Line

Yes, now C & K Packaging, the fastest growing name in automatic packaging, can offer you the finest performing empty can depalletizer on the market.

This rugged, quality-manufactured new addition means that now, more than ever, C & K is your number one source for complete automatic can handling and case handling lines. The new field-tested depalletizer is engineered to meet problems previously unsolved by competitive equipment. It, like the rest of the C & K line — case openers and positioners, case packers, gluers and sealers, is built for long, dependable, trouble-free life.

For complete details on the new C & K depalletizer — designed to handle cans of any diameter and from 2⅞" to 7" high with a left hand, right hand or left and right hand discharge — write today. And remember, with C & K equipment, complete servicing is as near as your telephone.

CROMPTON & KNOWLES C&K PACKAGING CORPORATION

Holyoke, Massachusetts

Sales Representatives:
Atlanta • Cleveland • Los Angeles • Berkeley, Calif.
Chicago • St. Louis • New York • Toronto • Montreal

dry field peas is up 37% over 1958 in the country. Dry bean acreage is almost identical with that of last year. Dehydrated vegetable packs trend upward, garlic continuing its steady growth, peppers finding increased usage, and "instant" onion creating added demand for that variety. Potato dehydrators (excluding flour & starch), who utilized 322 million lbs. in 1956 and 378 millions in 1957, used still more in 1958 and should consume as much in 1959 despite smaller over-all acreage.

Coffee: The world's exportable production is estimated at 50.6 million bags (132.276 lbs. each) in 1958-59, up from 45.8 millions the season before. U.S. imports, and the packs of canned coffee and bottled soluble products, are expected to be larger in 1959 than in 1958.

Nuts: U.S. peanut stocks in all hands were at a record high early this year, and acreage in 1959 is only 97% of that in 1958. The outlook for U.S. 1959 tree nut crops (almond, filbert, pecan, walnut) is promising, early weather conditions having been favorable. (See also Glassed Peanut Butter).

Sugar: U.S. sugar-beet acreage in 1959 is up 1% over 1958.

Breakfast Cereals: U.S. 1959 grain acreage is reported as comparing with 1958 as follows: corn—up 12%, spring wheat—up 9%, oats—down 6%, rice—up 11%. These figures appear to reflect the recent breakfast cereal trends, in which ready-to-eat cold breakfast foods have gained in demand, while products requiring heating and preparation have not. More cereals flavored with fruit juices, chocolate, maple, etc., are expected.

Ready Mixes: Fortified by findings that the cost of prepared flour mixes compares very well with that of the individual ingredients, ready-mix manufacturers expect increased production and sales in 1959. Demand is expected to be good for retail, institutional and commercial bakery packs.

FROZEN FOODS

Further Growth in Store in 1959 Packs

Fruits: Although U.S. strawberry acreage is down from 111,000 acres in 1958 to 106,000 in 1959, the crop is running ten days early and production looks promising. California's berry acreage, other than strawberry, is down from 3,800 thousand to 3,100 acres, the big drop being in boysenberries. The outlook for other fruit crops is promising in 1959. Total frozen supplies will be smaller, however.

Using Salt Efficiently

by INTERNATIONAL SALT COMPANY, INC.

"Why we use Sterling Purified Salt in the pre-sterilized juice process"

Quality tomato juice is the specialty of the Francis C. Stokes Company in Vincentown, New Jersey. They pack Stokes and private-label brands for several large grocery chains and leading independents. Present plant was rebuilt in 1955 and has the latest canning equipment, maintained spotlessly clean and sanitary.

Sterling Purified Salt is dispensed through the Sterling Bulk Salt Dispenser on a line averaging 180 cans per minute. 150 grains are deposited in each #46 can. The accuracy of the salter and the free-flowing quality of the salt make this high-speed operation possible.

"The main reason is that it flows freely from our dispensers," writes Francis C. Stokes, Jr., V. P., Francis C. Stokes Company.

"Ever since we changed to Sterling Purified Salt, we've had far less trouble with the dispensers clogging. This salt flows better than any of the others we tried in the past—and that's quite remarkable considering the very humid conditions encountered in a juice-canning plant.

"Here's another point. In our process, the juice is sterilized before it reaches the canning machines. In our four years of using and testing Sterling Purified Salt, we've never come across a batch that didn't meet our sanitation requirements!"

Guaranteed more than 99.95% pure, Sterling Purified Salt never has more than 40 parts per million combined calcium and magnesium, never more than 0.5 parts per million copper or iron. That's why Sterling Purified Salt more than meets the low requirements for calcium, magnesium, copper and iron for the entire food-processing industry . . . and why it *always* protects the flavor, color and texture of canned foods.

3 high-speed dispensers for Sterling Purified Salt. You can dispense Sterling Purified Salt any way you want—in brine, tablets or bulk—with one of the three special dispensers available from International Salt Co. Whatever dispenser you choose, you're sure of greatest accuracy and dependability at high line speeds.

The new Sterling Brinomat dispenses Sterling Purified Salt *brine* into as many as 300 cans per minute. The well-known Sterling Saltomat deposits Sterling Purified Salt *tablets* from 10- to 250-grain size. And the dependable Sterling Bulk Salt Dispenser is used to dispense *bulk* Sterling Purified Salt.

If you'd like more information on these modern salt dispensers, including a guaranteed analysis of Sterling Purified Salt, phone our nearest sales office, or write to us direct.

International Salt Company, Inc., Scranton 2, Pa. • Sales Offices:

Atlanta, Ga.	Chicago, Ill.	Memphis, Tenn.	Philadelphia, Pa.
Baltimore, Md.	Cincinnati, O.	Newark, N. J.	Pittsburgh, Pa.
Boston, Mass.	Cleveland, O.	New Orleans, La.	Richmond, Va.
Buffalo, N. Y.	Detroit, Mich.	New York, N. Y.	St. Louis, Mo.

Service and research are the extras in

STERLING SALT

INTERNATIONAL SALT COMPANY, INC.

ALLIS-CHALMERS TAKES A LACING - TO IMPROVE PRODUCT QUALITY

Selects CLIPPER Hooks and Lacers for durability, easy installation, and smooth operation on small rollers

Allis-Chalmers Manufacturing Company of Milwaukee, one of the nation's leading manufacturers of farm machinery and equipment receives multiple benefits and improvement in product quality by their application of Clipper hooks and lacers on Forage Blower and Harvester feed table aprons and draper type pick-up belts.

They find in the Forage Harvester and Blower that Clipper lacing makes possible use of protective shields against the draper. On all applications drapers are easier to install, run more smoothly on small rolls and are more durable. The material laced is two-ply rubberized material from 15½ to 35¾ inches wide and from .060 to .090 inches thick.

For more information— *Detailed product information and case history examples of Clipper machine-lacing benefits are contained in Bulletin No. 157. Send for your free copy today.*

Ask your Industrial Distributor for Clipper Products

Clipper BELT LACER COMPANY

994 Front Ave., N. W., Grand Rapids 2, Michigan

Vegetables: The 1959 U.S. frozen vegetable pack may be larger than that of 1958. Pea acreage for freezing is up 13%, California's spring spinach crop is bigger, and indications are that some other varieties also will be harvested in greater quantities. Total frozen supplies will probably run less than last year, however.

Juices: Florida's production of frozen orange concentrate in 1958-9 is running 9% ahead of last year, and the tangerine concentrate output is up an astonishing 700%, but grapefruit and blend packs are smaller. California's short crop will cut the frozen lemon and lemonade supplies. Other frozen juices and punches should show increases this year, production trends having been upward for some time.

GLASSED FOODS
1959 Pack Will Set New Record for Size

Honey: U.S. 1958 commercial honey output, 266 million lbs., was up 9% over 1957. Widely-varying weather conditions make it difficult to judge 1959 prospects so far, but bees came through the winter well in most areas, and pack is likely to be normal.

Olive Oil: U.S. pack of canned and bottled olive oil will be large in 1959. California 1958-59 production is estimated at more than 10 million lbs. (up sharply from the small output of the previous season), and U.S. imports were more than 53 millions in 1958, also a greater quantity than in the year before.

Tomato Products: The 1959 pack of tomato catsup, chili sauce and other tomato condiments in glass is expected to be smaller than the 1958 outturn, as a result of reduced acreage (see Canned Vegetables).

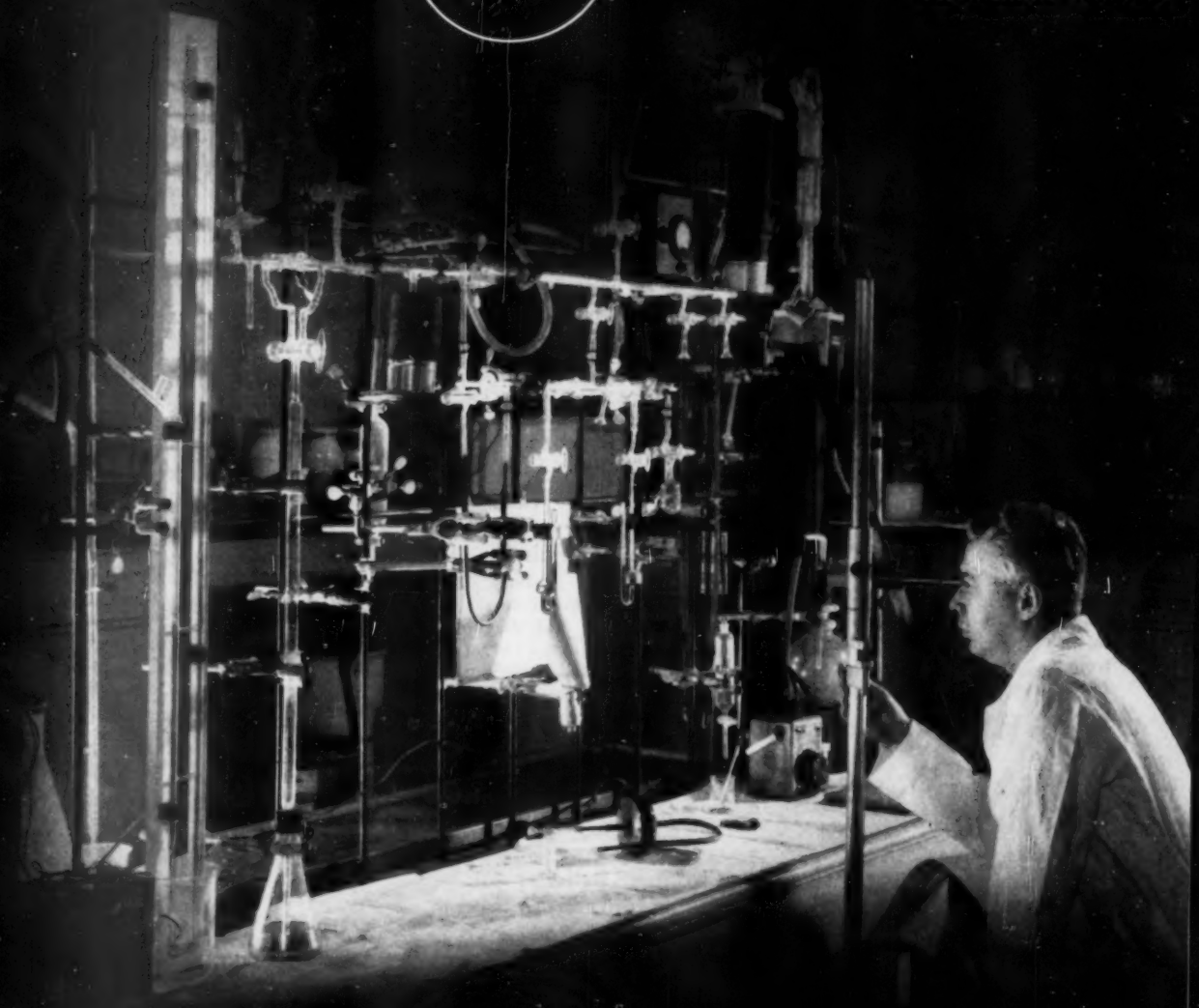
Peanut Butter: The 1958-59 U.S. pack is expected to be the largest in years, and perhaps in history. The 1957-58 output consumed 356 million lbs. of shelled nuts, more than half the available total. In the first seven months of this season, however, butter makers used 218 million lbs., 10 millions more than in the like period a year ago.

Salad Dressings: A continuing strong supply of cottonseed oil and a major growth in the output of soybean oil have been contributing factors to the steady increase in the production of mayonnaise and salad dressings in the United States. Final figures for 1958 have not yet been reported, but preliminary indications are that the U.S. output once again showed a gain, and that it will do so in 1959 as well.

One more reason* why you should

call Ball *first*

GLASS CONTAINERS
FOR METAL CLOSURES
PACKAGING COUNSEL



*Through repeated permeability tests, Ball research scientists make sure that Ball closures keep the appetizing flavor of your product in . . . harmful moisture vapors, oxygen and other gases out. Result—greater protection and longer shelf life. The original quality of your product reaches the user unimpaired—your best guarantee of repeat sales.

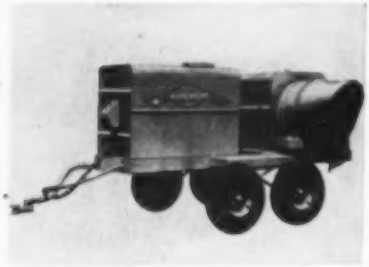
BALL BROTHERS COMPANY, INC., Muncie, Indiana; Chicago, Illinois; El Monte, California. *Represented in major cities through the United States.*

NEW EQUIPMENT/SUPPLIES

Aircrop Sprayer

DESCRIPTION: Sprayer Model 30-RC, designed for use on a medium-to-large acreage, sprays material across a 60-ft. swath covering up to 165 acres per day.

FEATURES: Having a hydraulically controlled rotating blower, the sprayer uses prevailing winds as an aid to spraying. Adjustable vanes at the dis-



charge outlet permit complete control of the spray pattern. The tractor driver controls the operation with a remote control unit mounted on the fender of the tractor.

MFR.: John Bean Div., Food Machinery & Chemical Corp., Lansing 4, Mich.

Aluminum Hoe and Scraper

DESCRIPTION: An all-aluminum hoe for scraping chemicals and foodstuffs from vats, tanks, storage bins, etc.

FEATURES: Hoe is lightweight,

therefore less fatiguing according to the manufacturer. It is non-corrosive and can be thoroughly cleaned without damage.

MFR: Aluminum Ladder Co., Dep't. 113, Worthington, Pa.

Food Peeling Concentrate

DESCRIPTION: An amphoteric non-toxic surface active agent for fruit, potato and food peeling. Trade name: Miranol C2M Concentrate.

FEATURES: When added to formulations, it reduces the surface tension of the caustic soda. Hand brushing time is lessened in plants requiring manual operation and lower processing temperatures can be used. The concentrate remains clear in solution.

MFR.: Miranol Chemical Co., Inc., 277 Coit St., Irvington, N. J.

Enriched Salt

DESCRIPTION: A vitamin and mineral coated fine flake, Alberger-processed salt. Golden yellow in color, it replaces the traditional wafer used to enrich white and other breadstuffs.

FEATURES: The vitamin - mineral content of the salt maintains its enrichment anywhere from 1¾ to 2¼ lbs. of salt per 100 lbs. of flour. Its use eliminates the need for selection, counting, fractionating and hand incorporation of wafers. Unlike the wafer, there is no time spent waiting for the salt to dissolve before adding it to the batch.

MFR.: Diamond Crystal Salt Co., St. Clair, Mich.

Synthetic Chamois

DESCRIPTION: Synthetic cloth for cleaning shiny metal surfaces, glass, woodwork, tile and machine parts. Trade name: Chamie-Tex.

FEATURES: It can be laundered in any soap or detergent. According to the manufacturer, Chamie-Tex improves after laundering and use and remains soft.

MFR.: Milwaukee Dustless Brush Co., 530 North 22nd St., Milwaukee 3, Wis.

Circulars, Bulletins Catalogues, Brochures

Sprockets, Collars in Stock: Specs for gray iron sprockets and collars available—Hamachek Machine Co., Kewaunee, Wis.

Industrial Spray Nozzles: 32 - page catalog contains complete listings and data on all types of nozzles for spraying plus an application section—Wm. Steinen Mfg. Co., Industrial Nozzle Div., 45 Bruen St., Newark 5, N. J.

NARW Directory: 1959 directory contains complete information on membership facilities—National Assn. of Refrigerated Warehouses, Inc., 1210 Tower Building, Washington, D. C.

"Flexflo" Centrifugal Pump: Bulletin No. G-567 presents the advantages of the pump. Complete charts on capacity, etc. are also included—Dept. 967, Cherry-Burrell Corp., Cedar Rapids, Ia.

Tips on Zip-Tape: Illustrated booklet on "How To Use Zip-Tape," a cellophane package opening tape, offers basic information to production personnel on working with Zip-Tape on and off packaging machinery — Dobeckmun, 3301 Monroe Ave., Cleveland 1, Ohio.

Series in Booklet Form: "The Fragrant Life," a series appearing in D&O News, is now available as a 40-page illustrated booklet—Dodge & Olcott, Inc., 180 Varick St., New York 14, N. Y.

Belt Conveyor Idlers: Book 2716, entitled "Belt Conveyor Idlers," contains detailed engineering selection data on five new series and 23 types of belt conveyor idlers and illustrates their versatility for a wide range of conveyor applications. It is key indexed for easy reference — Link-Belt Co., Dept. PR, Prudential Plaza, Chicago 1, Ill.

Vertical Conveying Systems: New 4-page, illustrated bulletin, #205, describes the Combing Vertical Conveyor . . . a compact method of typing together horizontal floor conveyors in a multi-floor building into an integrated system—Lamson Corporation, Syracuse 1, N. Y.

Electric Pallet Truck: Fully illustrated with photos and charts, bulletin 587 gives complete engineering data and specifications on turning radius, ramp clearance and truck dimensions for the new Barrett Powerox Model PXG electric pallet lift truck — Barrett-Cravens Co., 628 Dundee Rd., Northbrook, Ill.

M/R Corrugated Board: 4-page folder offers technical information on new moisture-resistant board. Charts and tables illustrate performance and characteristics of four M/R grades—Hinde & Dauch, Sandusky, Ohio.

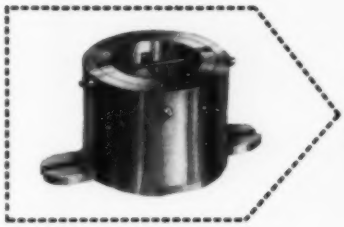
Speed Drive: Bulletin No. 2750 gives dimensions, engineering information and a cutaway view of Adjusto-Speed drive—Louis Allis Co., Milwaukee 1, Wis.

Film Listings: NCA's "Films About The Canning Industry" furnishes title, length, sponsor, brief description, etc. —National Canners Assn., Information Div., 1133 20th St., N. W., Washington 6, D. C.

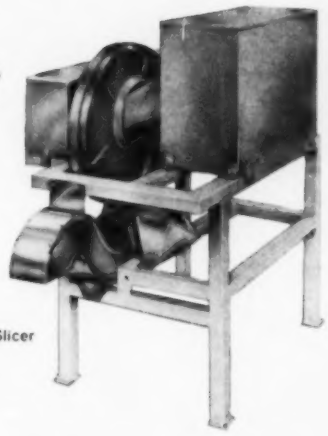
Building greater consumer acceptance through

Variety in SLICED BEETS

Fickle consumer palates require variety in sliced beets. And this variety is now available to you by simply interchanging your present Model "Y" Beet Slicer head with the new cutting head shown at right (change-over takes about a minute). With it you add segments of halves, quarters, sixths and eighths to the regular Model "Y" production of 6/32", 7/32" and 9/32" slices you are now getting. Through this wider product slicing range you build greater consumer acceptance and **more sliced beet sales.**



P.S. If you don't have a Model "Y", these new cutting advantages should make it more attractive than ever to add it to your line. Besides new slicing flexibility, the unit features rugged dependability, lowest possible maintenance (only one revolving shaft) and takes up only about 12 square feet of your floor space.



Model "Y" Beet Slicer

URSCHEL
LABORATORIES INC.
VALPARAISO, INDIANA

Designers and manufacturers of precision, high speed cutting equipment for food products

SPEAS
APPLE PECTINS
Standard of Quality
for 30 years

BETTER JAMS
Jellies and Confections Because...

1. *Wide pH Range*
2. *Uniform Strength*
3. *Neutral in color and flavor— blends naturally with more different fruits than any other pectin*
4. *Makes jams & jellies with an even, smooth texture (never grainy) and improved spreadability*

- **NUTRL-JEL** Regular and Slow Set. } For Preserves, Jams, Jellies and Marmalades
- **CONFECTO-JEL** For Jellied Candies — Ready to use.

For full information, technical advice, and formulas write Dept. C-5

Plants in Apple Regions From Coast to Coast Assure Dependable Supply
SPEAS COMPANY, GENERAL OFFICES, KANSAS CITY 20, MISSOURI

Put 'em on your production line—

THE All-New Scott VIBRO-LUX SEPARATING UNIT

FA-3500

Variable speed from 900 to 1000 vibrations per minute! Removes water, most splits and skins, and spreads commodity evenly over the screen (ideal for use ahead of inspection table). Hickory slats absorb vibration . . . no carry-through to floor! Feed height 22", discharge height 16½". Longer legs available.

REMEMBER —
The Scott Viner Company will go out of its way to give you service your way!

THE SCOTT VINER HYDRAULIC ELEVATOR

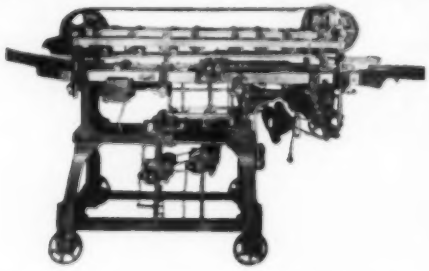
Handles any commodity that can be elevated and conveyed in water. Accurate control of water level, feed hopper only 20½" off the floor, at the pre-mixing chamber for easy loading from low discharge units . . . Motor is high and dry and fully protected from steam and water. Choice of 3", 4", 5" and 6" pumps. Variable speed drive, stainless hopper and/or contact parts optional.

THE Scott Viner COMPANY

Write today for complete information and specifications on these two production-pacing units.

1224 KINNEAR ROAD, COLUMBUS 8, OHIO

Get the MONEY-SAVING FACTS ON BURT LABELERS



1. Burt "Non-Stop" Labelers operate continuously. One operator can keep one or more labelers in operation without being rushed.

2. Burt's Dual Label Feed and exclusive Feed Fingers give you neat, accurate labeling . . . round the clock.

BURT

Burt Machine Co.

401 E. Oliver Street Baltimore, Maryland

Sold & Serviced in the West by:

KING SALES & ENGINEERING CO.
San Francisco 5 Los Angeles

JAMES Q. LEAVITT COMPANY
Ogden, Utah Oakland, Calif.
Seattle, Wash. Salem, Oregon

The tin can— still the best food container after 150 years of successful use!

STRAITS Tin FROM MALAYA

Photo courtesy Look

And the best tin cans,
more than 8* out of every 10,
are made with Straits Tin from Malaya!

No other food container combines all the advantages of the tin can. It is nontoxic, long lasting, easy to handle, and attractive. It is light, strong and economical. The tin can has won and held the complete confidence of customers.

You can depend on a reliable supply of Straits Tin—world's standard for quality and uniformity—from sizable reserves.

*Based on U.S. Bureau of Mines statistics for 1954-58 average

THE MALAYAN TIN BUREAU

Dept. 49E, 1028 Connecticut Ave., Washington 6, D.C.

Ask us to send you TIN NEWS, a free monthly letter. It will keep you posted on tin supply, prices, new uses and applications. Write today.

NEW PRODUCTS AND PACKAGES

Tangerine Juice

Minute Maid Corp., Orlando, Fla., has introduced fresh frozen tangerine juice nationally under the Snow Crop label. Production of a limited pack has been completed at the firm's Plymouth and Leesburg plants. The new product will be sold in direct shipments only.

Pineapple Chunks

The Citrus Div., Kraft Foods, National Dairy Products Corp., Lakeland, Fla., has announced a new institutional product—Daily Maid brand fresh-frozen pineapple chunks—to be processed at their Guanajay, Cuba, plant. The pineapple chunks are packaged in #10 size cans containing 6½ lbs. Kraft is also offering 30 lb. cans for the ice cream and bakery trade.

Pam Dry Fry

Of vegetable extract, Pam Dry Fry permits "dry" frying without the use of fats, oils or shortening. It can be applied to frying pans, roasting pans, broilers, waffle irons, grills, griddles, rotisseries, soup pots, sauce pans, or

casseroles, etc. It is packaged in a 9 oz. spray container which is considered enough for an average family for two months. Pam is being distributed by Pam Industries, Chicago, Ill.

French Fried Yams

Arkansas Frozen Foods, Inc., Little Rock, Ark., recently introduced new Lido brand Frozen French Fried Yams. The overwrap by Marathon of Menasha, Wis., is being used by the firm as a family design because of its

strong brand identity. A special feature in the design is the outline of a sweet potato or yam carrying product identification.

Greek Olives

Mario's Food Products Co., Detroit, Mich., has added a new member to its line of "flavor-cured" imported olives. It is imported Black Ripe Greek

Olives. The olives are dry-packed in 12 oz. re-usable ice box jars which contain 7½ oz., drained weight. The closures are blue and white — the Greek national colors.

Horseradish Whip

Reese Finer Foods, Inc., Chicago, Ill., has introduced a horseradish whip

TON-TEX Perma-Cleat Belts

move more food products faster up steeper inclines!

Sanitary conveyor belting for the entire food industry

Write for free 20-page Conveyor Belt Catalog today

Food packers, canners, processors find Perma-Cleat belts give better service. This non-toxic, white belt has solid molded neoprene cleats permanently vulcanized to it. Cleats are made any width or spacing, up to 3" high. Perma-Cleat belts resist water, oil, acid, heat, mild abrasion. Can be washed and kept clean — will not impart taste or odor to products carried.

TON-TEX CORPORATION, GRAND RAPIDS 2, MICH.

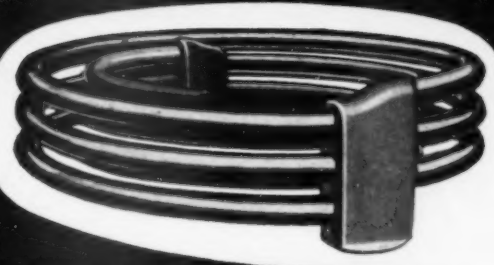
31 COLUMBUS AVENUE, ENGLEWOOD, NEW JERSEY

1180 AUZERAIS AVENUE, SAN JOSE 26, CALIFORNIA

TON-TEX CONVEYOR AND TRANSMISSION BELTING

TON TEX

World's Fastest-Cooking Coil!



Langsenkamp's
KOOK-MORE KOIL

Real cooking efficiency! Fresh steam enters three tubes simultaneously through unique divided header to deliver 18% more volume with 20% less steam pressure, at the same time providing instant drainage of condensate. This greater evaporating capacity assures a product of richer color and full-bodied flavor.

Kook-More Koils are made in 27", 42" and 60" banks. Tube size—3". Choice of copper, nickel or stainless steel. Write for full details.

F. H. LANGSENKAMP CO. 227 EAST SOUTH ST. INDIANAPOLIS 25, INDIANA

WIRE US COLLECT!

M & S #10 FILLER
6 piston, brass contact,
Stainless Steel bowl.
Excellent condition.
Wire or Phone collect GA-1-1380

ME MACHINERY AND EQUIPMENT CO.
123 Townsend St. · San Francisco 7, Calif.

Want Something?

Have Something to sell?

Use a Canner/-Packer Classified Ad!

Shuttleworth **UNSCRAMBLER**

handles bright cans gently . . . at great savings

- ★ One Man Operation
- ★ Handles Sizes 202 To 404 Inclusive
- ★ Very Gentle
- ★ Portable

DESIGNED BY CANNERS FOR CANNERS

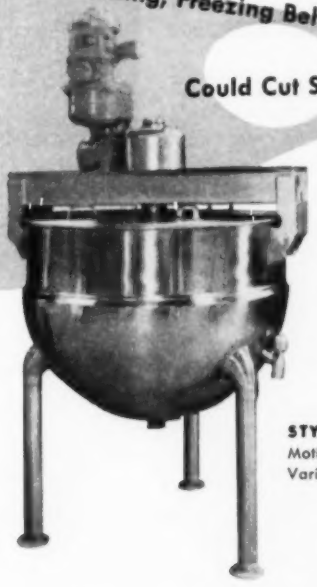
Send for full details
Write or Phone 190

Shuttleworth Machinery Corporation • Warren, Indiana

Modernizing Urgent for Macaroni Plants
Bakeries Modernize to Stay Solvent

IS PROFIT-EATING EQUIPMENT MAKING THESE HEADLINES IN YOUR PLANTS?

Antiquated Ideas Obsolete the Designs
Meat Operations Extra Obsolete
Dairy Modernizes for Profitable Products
Candy Plants Need Overhaul
Canning, Freezing Behind Times
Could Cut Soup Costs 50%



STYLE SA Double Motion Mix Cooker Variable Speed Drive

Has obsolete high-cost production machinery reduced your profits? If so: MODERNIZE.

Hamilton produces equipment that can show you how more can be accomplished in less time, and with quality assured through modern equipment and mechanical controls, rather than by human skills at high wages.

Hamilton equipment can brighten your profit picture.

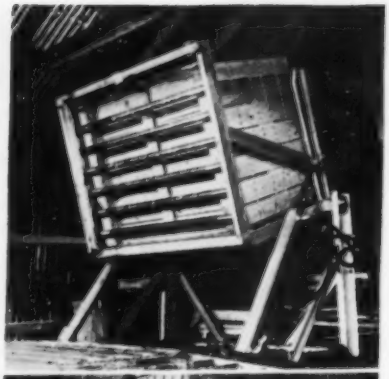
Write for Catalogue

ESTABLISHED 1870
HAMILTON Kettles
COPPER AND BRASS WORKS
DIVISION OF BRIGHTON CORP.

820 STATE AVENUE, CINCINNATI 4, OHIO

Spectacular Savings from Field to House

Wirebound bulk boxes and smaller James Crates save money, equipment, labor



Canners and fresh packers report saving 50% on initial container cost, replacing 14 men with only 2, increasing production, and saving up to 49% in storage space using wirebound pallet crates. Available in sizes to hold 17 to 40 bushels of fruits and vegetables weighing 500 to 2,000 lbs.

Others find rectangular 4/5 bu., 1 bu. and 1¼ bu. James Field Crates serviceable for 6 seasons, cost 40% less than other type containers, and stack 20 high in storage.

Have you seen the 18-minute color-sound movie "Bulk Handling Apples in Pallet Crates"? Showings arranged on request.

For more details and illustrated literature on both types of wirebound containers, write

PACKAGE RESEARCH LABORATORY, Rockaway, New Jersey

to the retail trade. The whip is packaged in a 5 oz. aerosol can which does not need refrigeration. Twelve cans are packed in a shipping carton.

New Package Briefs

The Ralston Purina Co. has introduced its Wheat and Rice Chex in a reclosable package, designed and developed by the Michigan Carton Co., Battle Creek, Mich. The package features a die-cut tuck in tab on the upper top flap that inserts into the opposite top flap to reclose the package.

Bond Pickle Co., Oconto, Wis., is using natural color photography on lithograph labels for its six "Bond" brand pickle products. The 12-oz. cans are by American Can Co.

Papa Leo's Italian Kitchens, Little Falls, N. Y., is using a new fractional container for packaging its frozen pizza product. Called Totem-Pak, the new package consists of a half-pint plastic-coated Nestyle container that fits into a glassine-lined paper cylindrical container. A "tite-seal" cover fits over both the Nestyle and the cylindrical container. The pizza sauce preparation is contained in the Nestyle and the lower container holds the dough. A flat plastic bag containing the cheese is inserted between the top of the dough and the bottom of the Nestyle. The new package is by Sealright Co., Inc., Fulton, N. Y.

Granny Goose Foods, Oakland, Calif., is packaging its potato chips in bags of a new material—a super-white, super-opaque double waxed sulphite with a bleached glassine liner—with a new design by Walter Landor & Associates. The bags are by Milprint, Inc., Milwaukee, Wis.

Continental Coffee Co., Chicago, Ill., is packaging its entire line of gelatin desserts in a new airtight container that guarantees the freshness of the product. The new package is a chipboard box containing a heat-sealed liner that shuts out moisture to prevent caking of the gelatin.

Crown Foods, Inc., Bridgeport, Mich., has adopted a newly designed glass container with a "Twist-Off" cap for its Sweet 'n Mild Salad Peppers. The container features a slightly tapered waist with ribbed sides. Four color spot labels are used. The jars are supplied by Ball Brothers, Muncie, Ind.; closures by White Cap Co., a subsidiary of Continental Can Co.; labels by Muirson Label Co., Peoria, Ill.

FOOD MERCHANDISING

Freezers OK Program for Industry Public Relations

The National Association of Frozen Food Packers will launch a program to improve public relations. Several new members have been added to the association staff and a public relations counsel, Manchester Associates, has been retained.

The association does not intend to schedule an advertising campaign. Specific promotional plans for the program's first year include four proposals.

- "Frozen Food Merchandiser of the Year" awards will be given yearly for outstanding promotions of frozen food products by retailers.
- Food clinics will be held regularly between packers and other segments of the industry to point up new developments.
- All segments of the industry will cooperate in an annual promotion. Included will be advertising and merchandising materials for both packers and retailers and others interested in cooperating.
- Value of frozen foods (frozen food nutritional study) will be discussed in regular news media, cookbooks, teaching materials, etc.

Reasons for establishing such a program are to improve relations between packers and retailers; industry and consumers; and packers and various other segments of the industry such as institutional buyers and handlers, warehousing, etc.

—National Assn. of Frozen Food Packers, Washington, D. C., at 18th annual Meeting in Chicago.

Fresh Taste Takes "January" Out of Slow Molasses Sales

Molasses—as a new taste in easy-to-prepare foods—will sell more than molasses as an old fashioned product. This is a long range program. To start it, a series of recipes with a new molasses appeal were developed.

In these recipes, molasses is used as an ingredient and as a flavoring aid. It is used as an ingredient in a new "Caribbean Barbecue Sauce" along with mustard, vinegar, Worcestershire sauce, and Tabasco sauce. Molasses is also featured as a glaze for ham; as a flavoring for a new pork chop-suey; and as an addition to canned foods. It is also combined with rolled oats, spices, dried fruits, nuts, peanut butter, shortening, flour, frosting mix and ice cream sauce for a series of desserts.

—Richard S. Taussig, chairman of the board, American Molasses Co.

Your Discount May Get That Government Order

A bid on a Military Subsistence Supply Agency canned food contract is entered at the discount price. For example, if a bid is made for a $10,000 order with a 1% in 10 days cash discount, the bid is actually entered at $9,900.

Quite regularly, a bid is accepted on the difference of a discount.

The discount must allow sufficient time for the government agency to make payment. However, a discount of 1% in 10 days counts the same as 1% in 30 days. Likewise a bid for $9,900 with no discount is entered at the same price as a $10,000 bid with a 1% in 10 days discount.

Payment, whether discounted or not, is usually made within 10 days.

—Maj. Gen. Hugh Mackintosh, executive director, MSSA, at National Canners Assn. convention, Chicago, Feb. 23.

Brokers' Commissions Can Be Lowered

The circuit court decision that a broker can legally lower a commission percentage to sell a customer, may jeopardize administration of the Robinson-Patman Act.

The Federal Trade Commission, which originally decided against the broker firm of Henry Broch and Co., Chicago, lost the decision in the United States Court of Appeals for the Seventh Circuit. The case can still go to the Supreme Court if the FTC appeals.

According to the court, a broker can lower his commission (Broch lowered a commission from 5% to 3%) and pass the savings along to a buyer, in order to get an order.

—Sigurd Anderson, Federal Trade Commissioner, at National Canners Assn., Feb. 21.

1ST ANNUAL COOKOUT CHAMPIONSHIP is being launched by 11 national grocery products manufacturers. Joining Kaiser Aluminum as major sponsors are Calif. Packing Corp. and Carnation Co. Headlined "for men only," out door chefs will be asked to enter favorite recipes, June 26—Aug. 31. 25 winners to vie for national honors at Kaiser-sponsored "cook-off" in early November at Hawaiian Village Hotel in Honolulu.

NEW! *Specialized* SALT BETTER FOR CANNERS!

Hardy CUBE

CANNERS FINE SALT

Has 6 Advantages Over Flake Salt—for Food Processors!

1. *Has a FAST, UNIFORM dissolving rate that imparts a more uniform salt content and flavor* to canned foods . . . because these fine cube crystals are uniformly double-screened, filter-dried — and do not break up like uneven, brittle flake salt crystals.
2. *Approved purity.* Contains only 1/6th as much calcium as limit set by canning industry; 99.8+% sodium chloride.
3. *Will not cake* under normal conditions in your plant—and keeps well —even though it contains no additives . . . because of the fine cube shape, and moisture-proof bags.
4. *Requires 1/3rd less storage space.* Not as bulky as flake salt.
5. *You save up to 27¢ on every 100-lb. bag . . .* because our modern, highly-efficient, quadruple-effect evaporators produce this higher-quality, fine cube salt at lower cost than flake salt.
6. *Plenty always available.* Production of fine cube salt is not limited.

Write for Complete Information!

•

HARDY SALT CO.
P. O. Drawer 449
St. Louis 3, Mo.

There is a High Quality HARDY SALT for Every Purpose!

SUPPLIERS NEWS

Companies & Plants

Ohio Boxboard Company announced plans to construct an 80,000 sq. ft. corrugated container plant in Lancaster, Pa. The plant is expected to produce 250 million sq. ft. of containers annually.

Crown Cork & Seal Co., Inc., Philadelphia, Pa., has begun construction of an 80,000 sq. ft. can plant in Winchester, Va. Completion is scheduled for September.

Owens-Illinois Glass Co., Toledo, Ohio, will erect a modern, multi-furnace glass container plant on a 24-acre site in New Orleans, La. The plant will occupy about 150,000 sq. ft.

Brockway Glass Co., Brockway, Pa., and Tygart Valley Glass Co., Washington, Pa., have agreed on a statutory merger that would make Tygart a wholly-owned subsidiary of Brockway.

Union Bag-Camp Paper Corp., New York, N. Y., has acquired a controlling interest in Highland Container Co., Jamestown, N. C., through an exchange of stock. The firm will be operated under its original name and with its present personnel as a subsidiary of Union.

Pfaudler Permutit Inc., Rochester, N. Y., has purchased the Ideal Welding Co., Ltd., Toronto, Canada, at an unknown price. The Canadian firm will become a part of Pfaudler Permutit Western Hemisphere operations.

Dow Chemical Co.'s New England sales office in the IBM Building in Boston, Mass., features a teletype communications center through which customer orders are relayed to any Dow manufacturing location in the country.

Men in the News

Harvey C. Tull, formerly Consolidated District Sales manager, Crown Cork & Seal Co., Inc., Philadelphia, Pa., has been named regional sales manager of the firm's new Central Region. This region includes Michigan, all but the greater Chicago area of Indiana, central and western Ohio, and all of Kentucky except the Paducah trading area. **Mark T. Concannon** replaces Mr. Tull as consolidated district sales manager with offices in Philadelphia.

Leon Bischoff has been promoted to executive vice president of Milprint Overseas Corp., Milwaukee, Wis. **Oliver Ogle,** formerly assistant general manager, was appointed vice president.

Robert R. Smith was appointed director of a new Packaging Sales Div., DuPont Co., Wilmington, Del. **Robert C. Myers** was appointed director of a new Industrial Sales Division.

Robert C. Smith was appointed advertising manager of the Ferry-Morse Seed Co., Detroit, Mich.

Thomas B. Duff has rejoined American Viscose Corporation's Film Div. as sales service manager for the N. Y. district. Mr. Duff has returned after serving two years in the army.

Dr. L. E. Clifcorn

G. C. Calvert

Dr. Laverne E. Clifcorn was appointed manager of research for the Central Division of National Can Corporation.

George C. Calvert, vice president of Pfaudler Permutit Inc., Rochester, N. Y., previously manager of the firm's Elyria plant, will move to Rochester to supervise all Western Hemisphere operations outside of the U.S. **Thomas Griswold** will replace him as manager of the Elyria plant. **E. W. Zoller** was named manager of domestic manufacturing operations of the Pfaudler Division.

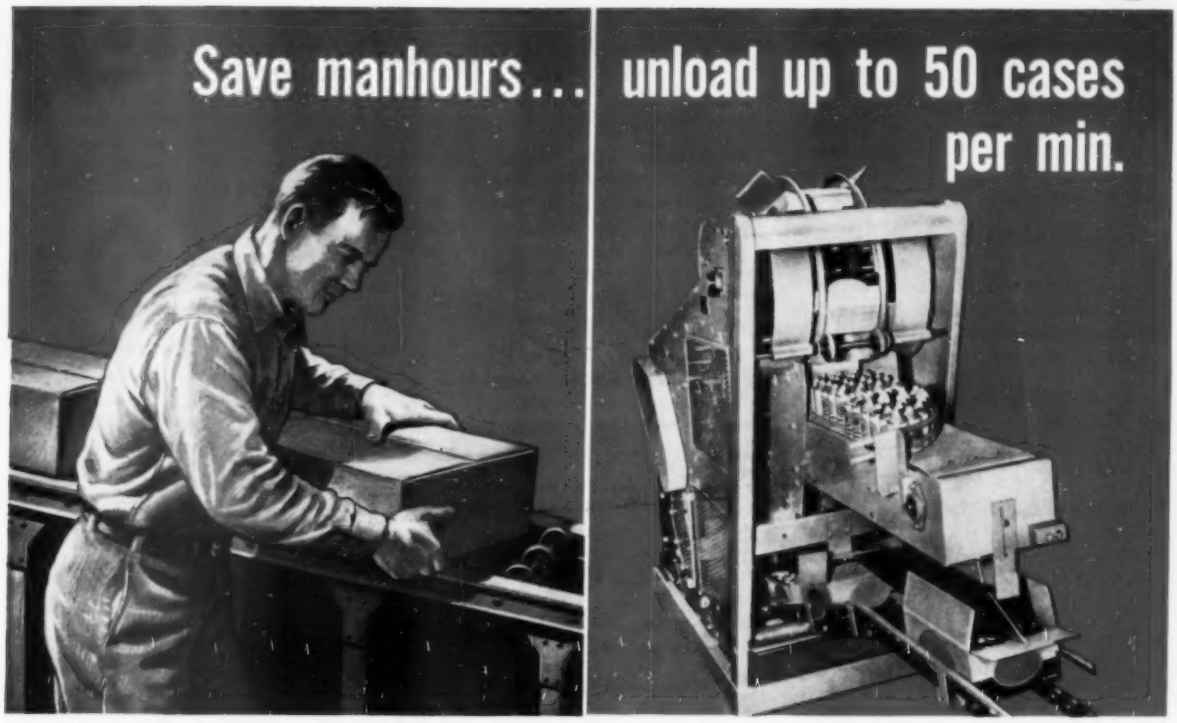
Obituaries

Russ Koeniger, 55, Wisconsin representative of National Can Corp., died recently of a heart attack at his home in New London, Wis. He was with National Can 25 years and had recently been appointed manager of the Seamer Service Dept., Central Div.

Mrs. Helen Stafford Dingee, 49, wife of John F. Dingee, died recently after having been in failing health for some time. Mr. Dingee was formerly general manager of the Marketing Bureau, Can Manufacturers Institute.

John R. Porn, 49, district sales manager for the Continental Can Co. in Kansas City, Mo., died of a heart attack in Chicago. Mr. Porn had been a member of the firm for 27 years.

ECONOMIZING THROUGH MECHANIZING!...



with the RCA High-Speed Uncaser!

—for cans, bottles, jars

Versatile RCA Uncasers thrive on high-speed bottling and canning operations, providing substantial savings in manhours, time and space. Here's how and why this remarkable new equipment is best suited to meet your uncasing needs:

FAST! Unusual combination of speed, flexibility and compactness. Unloads up to 50 cases per minute! Handles cans, bottles, jars—in single layer cases.

GENTLE! Deposits all types gently, and in an upright position on conveyor.

FLEXIBLE! Change-over from one size container to another can be accomplished in minutes. Infeed and discharge runs can be adapted to existing flow lines.

SIMPLE MAINTENANCE AND INSTALLATION! Component parts are standard and can be easily replaced by plant personnel. Continuous and purely mechanical in motion, the RCA Uncaser requires no infeed timing and can easily be installed with any make single filer.

Find out how you can economize in your plant through mechanizing your can and bottle handling operation . . . with the new RCA High-Speed Uncaser.

Mail coupon below for complete descriptive folder

RCA Tmk(s) ®

RADIO CORPORATION of AMERICA

CAMDEN, N.J.

In Canada: RCA VICTOR Company Ltd., Montreal

Radio Corporation of America
Dept. T-344, Building 15-1, Camden, N. J.

☐ Please send me complete information about RCA UNCASER.

NAME _____

TITLE _____

COMPANY _____

ADDRESS _____

CITY _____ ZONE _____ STATE _____

INDUSTRY NEWS

Companies & Plants

Hunt Foods Co. will construct a 113,000 sq. ft. warehouse adjacent to the company's plant in Toledo, Ohio. The expansion will increase storage capacity from 400,000 cases to 1.9 million cases.

Consolidated Foods Corp., Chicago Ill., has acquired Quality Food Stores, Inc., operator of 12 Piggly Wiggly supermarkets in southern Minnesota. The acquisition was made through an exchange of stock.

A. E. Staley Manufacturing Co., Decatur, Ill., is building a 108,000 sq. ft. research center to be completed in mid-1960.

Durrance Ranch, Lake Placid, Fla., has merged with three Canadian vegetable producing and packaging organations to form Hardee Farms International, and independent public company headed Bram Dees, president.

Aetna Packing Co., Baltimore, Md., processors of pickles and related food products, is building a one-story, 17,000 sq. ft. processing plant which will have an additional 5,000 sq. ft. concrete base outside pickle vat storage area.

John Morrell & Co., Chicago, Ill., has purchased the business of Saratoga Meat Products Co. The acquired firm will be operated as a subsidiary of John Morrell & Co., using the Saratoga name and its present brand indentification.

Birds Eye division of General Foods Corporation, Winter Haven, Fla., is expanding its plant at a cost of $750,000. The expansion, which will increase the plant's output by 50%, will begin early this summer.

Larry Stern, former editor and director of Public Relations for the Sales Executives Club of New York, has joined Dun-Rite Placement Agency, N. Y., as general manager of the Food Sales Department. The department will concentrate on the sales personnel requirements of the food industry.

Townsends, Inc., Millsboro, Dela., have expanded their operation to include packaged frozen poultry. The firm operates its own hatcheries, feed mills, brooder houses, dressing plant, freezing and cold storage facilities.

Seeman Brothers, Inc., distributors of White Rose Foods, has purchased Francis H. Leggett & Co., Cincinnati, Pittsburgh and New York distributor of Premier brand foods, for $3.5 million dollars.

Nick Argondelis is completing additional processing rooms at his Pearl Grange Fruit Exchange, Benton Harbor, Mich. An additional 40,000 square feet in two units will increase processing capacity for cherries by 40% and for strawberries 35%. New equipment will be installed.

Be-Mo Foods, Inc., of Kalamazoo, Mich., has almost completed its $100,000 potato chip plant. The new building will house processing, packing and shipping rooms and office.

Oxford Royal Mushroom Products, Inc., Kelton, Pa., has completed a new plant with a growing capacity of over ½-million lbs. of mushrooms yearly. The plant features an Automatic Humidity Control System which is operated from outside the mushroom houses by pre-set control panels.

Oconomowoc Canning Co. will not operate its plant at Stratford, Wis., this year, according to Emil Weix, manager of the firm's plants at Stratford and Merrill. Mr. Weix cited warehouses "stacked with cases to the rafters" after bumper crops during the past two years as the reason for the shutdown.

C. H. Musselman Co., Biglerville, Pa., has acquired Dwan's Home Canning Co., which has plants in St. Joseph and Paw Paw, Michigan. The Paw Paw plant was formerly the Paw Paw Canning Co., which merged with Dwan in 1958.

National Frozen Foods Co. of Atlanta, Ga., will establish a processing and distribution center in Wyandote County to service grocery chain customers throughout America.

Triple M Packing Corp., a food packaging concern will build a Food Distribution Center in South Philadelphia. The firm will combine its packaging plant and headquarters in a $350,000 building with 35,000 ft. of space. Construction will begin in May.

P. J. Ritter Co., Bridgeton, N. J., and Brooks Foods, Inc., Collinsville, Ill., have merged. Both companies will continue to pack under their respective labels, with Brooks Foods operating as a subsidiary of P. J. Ritter.

Draper-King Cole, Inc., Milton, Dela., announced that affiliated interests have purchased the plant and equipment of the Bateman Canning Co. of Macon, Ga. The Macon plant will be operated under its present name. New officers are Harry Bonk, president; H. Carlton Draper, vice president and H. R. Draper, secretary-treasurer.

The Monarch Foods canning plant in Ackley, Iowa, has been purchased by Ackley citizens for $157,000.

Men in the News

Arch McClure was appointed manager of St. Joseph, Mo. plant, Quaker Oats Co. He succeeds **C. R. Martin,** who is retiring after 22 years of service.

L. E. Felton, vice president and treasurer, Green Giant Co., Le Sueur, Minn., was elected executive vice president of the firm. He will continue to serve as treasurer.

E. B. Freyfogle

H. M. McKay

Edward B. Freyfogle was named manager of a new process service section in the manufacturing division of A. E. Staley Manufacturing Co., Decatur, Ill.

Hugh M. McKay was appointed to the newly created position of general manager of Refined Syrups & Sugars, Inc., Yonkers, N. Y.

Elbert W. Garlock was appointed to the sales department as assistant to the president of Empire State Pickling Co., Phelps, N. Y. Mr. Garlock will continue as president of Victor Food Corp., Victor, N. Y., on a consulting basis.

Professor C. B. "Charley" Sayre will retire June 30 after more than 35 years of service at the Geneva Agricultural Experiment Station, Geneva, N. Y.

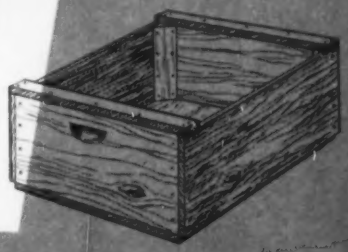
John M. Seabrook, president, Seabrook Farms Co., Seabrook, N. J., and **Frank H. Wheaton, Jr.,** president, Wheaton Glass Co., Millville,

(Continued on page 64)

MORE

FOR YOUR MONEY WITH

NEW



CELLU-SAN Q

More power to repel rot in field boxes and hampers
More power to resist the ravages of hot sun, drenching rain, and rough handling
No increase in price

This is the simple story of new Cellu-san Q. Behind these brief statements lies a breakthrough in chemical science which was accomplished after a decade of experience in the field of wood preservation for the canning industry.

Now a way has been found to increase fungicidal potency 88% and the effectiveness of water repellents 19%. The result far surpasses the quality of any product of its kind now on the market.

Cellu-san Q will undoubtedly mean greater savings for you. We invite you to keep abreast of this new development by writing today for the full story entitled "Cellu-san Q. Proof of Superiority".

CHEMICAL PRODUCTS DIVISION
Darworth Incorporated • Simsbury, Connecticut

Please send me the facts about new Cellu-san Q.

Name_____

Address_____

_____

PRODUCED BY THE ORIGINATORS OF THE FIRST FIELD BOX PRESERVATIVE

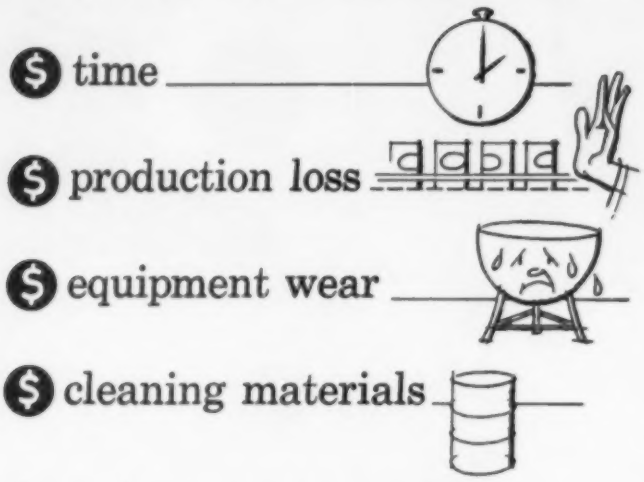
ANCHOR HOCKING ENGINEERING IS THE PROMISE OF PROGRESS

Engineering is a dedication at Anchor Hocking. Engineering is Anchor Hocking's foundation . . . and its future, too. It reaches into every phase of Anchor Hocking's operations. It's engineering that includes the development of new and better products through research. It includes high manufacturing standards and rigid quality controls through plant engineering. And it includes the creation of improved packaging line operations through engineering field service. Food packers know from years of experience that they can depend on Anchor Hocking for carefully engineered glass containers, closures, sealing equipment and packaging service. So contact an Anchor Man now! Anchor Hocking Glass Corporation, Lancaster, Ohio.

ANCHOR HOCKING

Put an Anchor Man on your team.

Add up your total cleaning costs...



and see how you save with

OAKITE SPEED-CLEANING

Take a new hard look at any cleaning job in your plant. Notice how the big costs are hidden at first—the time it takes... equipment out of production... possible damage to equipment. Compared with these major costs, the material itself is a minor cost.

That's why buying a cleaning material at price-per-pound can be the most expensive way in the end. It's why safe Oakite speed-cleaning gives you low-cost end results—always.

And here's an interesting point. Consider the low concentration you need with an Oakite compound compared with an ordinary cleaning material, then figure the cost *per gallon of solution*. It turns out that you save even here—that Oakite quality compounds actually cost less!

Find out about the big benefits that go with Oakite methods and materials, Oakite service and know-how. Call your local Oakite man or write for free booklet on food plant sanitation to Oakite Products, Inc., 26G Rector Street, New York 6, N. Y.

SPECIALIZED INDUSTRIAL CLEANING
OAKITE
MATERIALS · METHODS · SERVICE
SCIENCE
In our 50th year

Export Division Cable Address: Oakite

Technical Service Representatives in Principal Cities of U. S. and Canada

(Continued from page 60)

N. J., were elected to the board of directors of the South Jersey Gas Co.

Harry T. Chandler was promoted to manager of the Chattanooga, Tenn. plant of Quaker Oats Co. He succeeds **Hamilton Browne,** who was named manager of the firm's eastern sales region at Elizabeth, N. J.

Parlin Lillard, vice president and general manager of General Foods Corp., Chicago, Ill., was named vice president—packaging and special projects. **E. F. Fitzmaurice** will succeed him as general manager of the division.

Henry Engel was appointed vice president of operations, Lord Mott Co., Inc., Baltimore, Md. He will continue to serve as secretary-treasurer.

Myron D. Albro was appointed director of the Division of Food Control in the New York State Dept. of Agriculture and Markets.

K. N. Jolly was appointed director of corporate relations of Campbell Soup Co., Camden, N. J.

E. G. Olwell, Jr.

John A. Mayer

E. G. Olwell, Jr., has been appointed manager—sales & service for the Rich-Taste Coffee Corp., Flushing, N. Y.

John A. Mayer, president of Mellon National Bank and Trust Co., was elected a member of the board of directors of H. J. Heinz Co., Pittsburgh, Pa.

Harvey A. Thielke was named New York regional sales manager for Hunt Foods and Industries, Inc., Fullerton, Calif. **John Weiller** was appointed Hunt's New York district manager.

John L. Cockrill and **Roy V. Edwards** have been promoted to vice presidents of Wilson & Co. Inc., Chicago, Ill.

J. A. Parker was appointed manager of the newly created Youngstown Baby Food Sales Branch of H. J. Heinz Co., Pittsburgh, Pa.

Glenn W. Steihm was named general manager and director of operations of Suncrop Foods Co-operative,

Get positive control of

- aphids
- leaf miners
- onion maggots
- vinegar flies (drosophila sp.)

and a wide range of other insects attacking vegetable crops with

DIAZINON®

INSECTICIDE

DIAZINON insecticide is effective against many insects which have become difficult or impossible to control with other pesticides.

DIAZINON insecticide's long-lasting, broad-spectrum action gives you more economy and better control for your insecticide dollar.

Get DIAZINON insecticide today from your favorite farm supply dealer.

Residue tolerance of 0.75 ppm permits application relatively close to harvest.

ORIGINATORS OF DDT INSECTICIDES

GEIGY AGRICULTURAL CHEMICALS • Division of Geigy Chemical Corporation • Saw Mill River Road, Ardsley, N.Y.

Protect quality with .00003 accuracy ...INDUSTRY'S HIGHEST!

Bausch & Lomb

PRECISION

Refractometer

Here, to keep production quality to your strictest standards, is the most accurate Abbe-type refractometer on the market. You can get fast, easy readings accurate to *at least* .00003—three times higher than any other Abbe! Year after year, too, because parts are compensated against wear. (Test prism available for instrument check, certified by U. S. Bureau of Standards.)

Test transparent or opaque samples, liquid or solid, by transmitted or reflected light. $1.20n_D$-$1.70n_D$ range with three quickly interchangeable prism assemblies.

If high accuracy is significant in your work, you'd do well to send for complete information on the B&L Precision Refractometer.

BAUSCH & LOMB OPTICAL CO.
69741 St. Paul St., Rochester 2, N. Y.

Send me complete data on the following B&L Refractometers:

☐ Precision ☐ Industrial ☐ Hand
☐ Abbe-3L ☐ Butyro ☐ Juice
☐ High Range Abbe-3L ☐ Oil Grading ☐ Dipping
☐ I'd like a demonstration of the models checked above.

NAME, TITLE .....
COMPANY .....
ADDRESS .....
.....

MAIL COUPON FOR DATA AND ON-THE-JOB DEMONSTRATION OF INDUSTRY'S MOST COMPLETE LINE

BAUSCH & LOMB
SINCE 1853

Inc., Baltimore, Md., a group marketing organization recently formed by canners of the Tri-State area.

Roy C. Justin was named sales manager of the cooked meat department, Rath Packing Co., Waterloo, Iowa.

Dr. Kathryn E. Langwill was appointed director of research of Refined Syrups & Sugars, Inc., Yonkers, N. Y.

J. Edwin Kerr was named vice president in charge of marketing for Austex Foods Inc.

James H. Black has joined College Inn Food Products Corp., Chicago, Ill., as executive vice president, general manager and a member of the board of directors.

George Petritz, formerly general manager of the Frozen Foods Division of Pet Foods, Inc., is now president and general manager of the Sandy Mac Corp. of Traverse City, Mich., manufacturers of printed electric circuits.

H. C. Harder

Harold Hellman

Harold Hellman, executive assistant to the president, was named vice president, administration; and **Howard C. Harder,** comptroller, was named vice president, financial, of Corn Products Co., N. Y.

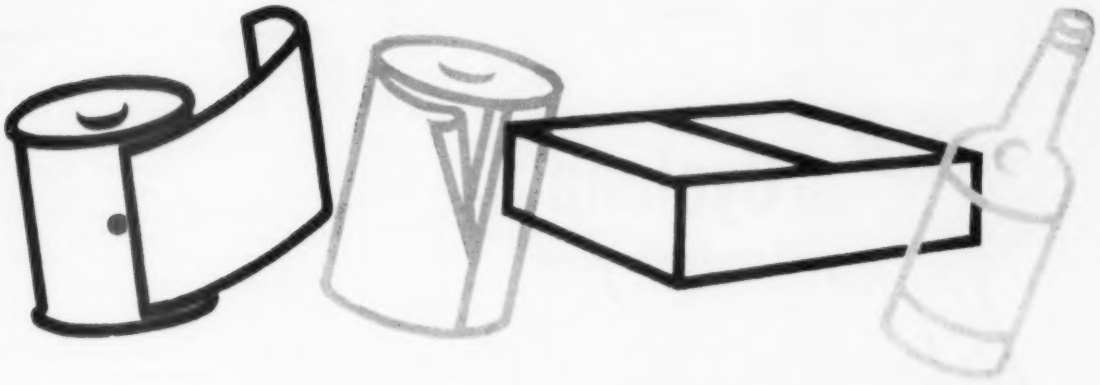
Ray Frodey, research operations coordinator, Gerber Products Co., Fremont, Mich., will give a talk, June 9, on the food processing industry during a short course on Industrial Water Conservation at the University of Michigan.

Al Turmail has bought Ike Lyons' half interest in Bluffton Foods, Inc., Bluffton, Ind. Clarence Brown, formerly with Brooks Foods, Inc., is the new manager and superintendent for the firm.

George S. McIntyre, head of the Michigan Department of Agriculture, was honored with an award for distinguished service at the fifth annual Agricultural Banquet of the Michigan Frozen Food Packers Assn.

James D. Wells, general sales manager, William Underwood Co., Water-

SPECIFY SWIFT'S RESIN BASED PICK-UP GUMS • LAP END PASTES
GLASS LABELING ADHESIVES • CASE SEALERS



If Your Canning Operations could be improved with

ADHESIVES MADE FOR GREATER SPEED STRONGER TACK GREATER MILEAGE ECONOMY AT EVERY CANNING TEMPERATURE

Try Swift's High Speed Resin Adhesives

From pick-up to case sealing there's a Swift-quality adhesive made specifically for your labeling and packaging requirements.

A complete selection of formulations for the most specific requirements is available from Swift's 22 adhesives plants that serve all the United States and Canada with prompt, courteous, *and* authoritative service.

Call your Swift Adhesive Specialist today, or write for additional information to Swift & Company, Adhesive Products Dept., Chicago 9, Illinois.

To Serve Your Industry Better

A-47

Swift
104TH YEAR

WITH THESE ADHESIVE PRODUCTS
RESINS AND RUBBERS IN EMULSION OR SOLVENT
DRY, LIQUID AND FLEXIBLE ANIMAL GLUES • LIQUID DEXTRIN ADHESIVES

MAIL THIS COUPON

Cyclone Fence, American Steel & Wire
Dept. D-581, 614 Superior Avenue, N.W., Cleveland 13, Ohio
Please have your trained representative call on us to discuss our production problems.

Name..... Company.....

Address.....

City..... State.....

Let **Cyclone** carry your production load

Competitive market prices make production efficiency a more vital part of business success than ever before. Production waste, unnecessary manual handling, or time-consuming carting of products can add unnecessary expense to the price of your product. In many cases, a Cyclone Metal Processing Belt could help make your production line more efficient, thus making your product price more competitive.

We'd like the chance to send one of our trained salesmen into your plant to investigate your own production problems. Chances are he can show you, with facts and figures, exactly how a Cyclone Belt can be a blessing to your profit picture. His suggestions will be tailored to YOUR plant and YOUR product, not just a general sales pitch. There is absolutely *no obligation*.

USS and Cyclone are registered trademarks

Cyclone Fence Dept.
American Steel & Wire
Division of

USS United States Steel

Manufactured at Waukegan, Ill. and Oakland, Calif. • Sales Offices, Coast to Coast

YOU CAN BUY "CAN PROTECTION"

. . . WITH

BERLIN CHAPMAN

PERFORATED

plus CRATES

A PERFECTLY EVEN STACKING PLATFORM

Welded bottom, 1/8" steel boiler plate sides perforated with 1" holes, ample in number to permit proper circulation of steam, BERLIN CHAPMAN Perforated Crates will give you years of satisfactory service . . . maximum protection for your filled cans. With BERLIN CHAPMAN Perforated Crates you buy "can protection," but of importance to you, the welded bottom assures a perfectly even stacking platform . . . capacity 78 gals.; weight 160 lbs.; dimension, outside diameter 38 in.; bale of 1 1/8 in. diameter round.

write or wire FOR QUOTATIONS

Since 1908

BERLIN CHAPMAN CO. BERLIN • WISCONSIN

A DIVISION OF CONSOLIDATED FOUNDRIES & MFG. CORP.

town, Mass., has been appointed director of marketing. Mr. Wells will be responsible for sales, merchandising and advertising, both foreign and domestic.

Richard Healy was named Minneapolis district manager of the Birds Eye div., General Foods Corp., White Plains, N. Y.

Edwin Krause, president, Big Stone Canning Co., Ortonville, Minn., informed the house compensation committee that proposed increases in benefits to employees injured on the job would double the cost of workmen's compensation to Minnesota's canning industry.

M. E. Webb has been appointed director of purchases of the D. E. Winebrenner Co., Hanover, Pa. Mr. Webb has been with the firm as a member of the Field Department since 1945 and will continue to function as a consultant in field work.

Walter H. Berg, Jr., was named production manager of the SEA Div. of Salada-Shirriff-Horsey Inc.

Mark H. Mitchell was elected president of The Larsen Co., Green Bay, Wis. Mr. Mitchell succeeds the late R. E. Lambeau. He has been production manager for all Larsen operations since January, 1958. Other officers elected were **John M. Rose,** treasurer; **Carl W. Kouba,** secretary; **Quent F. Williams,** assistant treasurer; and **Louis F. Kramer,** assistant secretary.

Jo Ann Shurpit, director of home economics, Libby, McNeill & Libby, Chicago, has been appointed chairman of the Committee on Home Economics of the American Meat Institute.

Obituaries

Albert T. Smith, one of the pioneer canners of Utah, died recently. He was the founder and president of the Smith Canning Co. in Cleerfield. Mr. Smith was the father of Milan D. Smith, newly elected vice president of the NCA.

G. Sherwin Haxton, 74, chairman of the board of Haxton Foods, Inc., Oakfield, N. Y., passed away at his home in Rochester, N. Y. A pioneer in the industry, he had varied business and civic interests. Mr. Haxton was a former president of the NCA and of the New York State Canners and Freezers Assn.

Mrs. Margaret Fleming, wife of Garnett Fleming, died recently. Mr. Fleming is associated with Morristown Canning Co., Morristown, Ind.

In-plant Water Use Reduced by 50 Per Cent

Conservation of water was one of the topics under discussion at the 6th Annual Pennsylvania Canners Workshop, sponsored by the Pennsylvania Canners Assn.

David R. Gross and Arthur Kershaw told how their company, the Sunshine Packing Corp., was able to reduce the use of water in their factory operations by 50%, while increasing production. According to Mr. Kershaw, this was accomplished through the installation of different equipment, a tightening of the use of water generally and more specifically by the clean-up crews.

The workshop was attended by 169 persons interested in various phases of the canning industry. Other subjects under discussion included employee relations, sanitation in the canning plant, snap bean variety cutting, and creative thinking.

Report on NAFFP Elections of Officers and Directors

Harold J. Humphrey, research consultant for General Foods Corp., was named president of the National Association of Frozen Food Packers during the 18th annual convention which was held in Chicago, March 1-4.

Other officers include: 1st vice president—W. F. Edwards, executive vice president of Pasco Packing Co.; and 2nd vice president—James Lawless, president of Frosted Fruit Products.

Leon C. Jones, retiring president, will serve as an ex-officio member of the board of directors for one year. The following are new members added to the association's 20-man board: Frank Trusdell, Ark-Homa Farm Frozen Foods, Inc.; Mario Ielmini, Paterson Frozen Foods, Inc.; Kenneth Jolly, Campbell Soup Co.; John Seabrook, Seabrook Farms Co.; and S. E. Lasselle, Portland Canning Co., Inc.

Tennessee Freezers Hear Strawberry Official Speak

Malcolm B. Douglas, manager of California Strawberry Advisory Board, was the principal speaker at the annual spring meeting of Tennessee Frozen Foods Assn., held in Memphis on March 30. Processors from Georgia, Alabama, Louisiana, Arkansas, Missouri, Oklahoma and Kentucky were invited to attend the event, and heard Mr. Douglas explain the workings of the marketing order administered by his agency.

The next session of the group is scheduled for the fall, and will be held at Knoxville.

Tennessee-Kentucky Canners Assn. held a short business meeting of the board of directors following the Memphis gathering of the freezers.

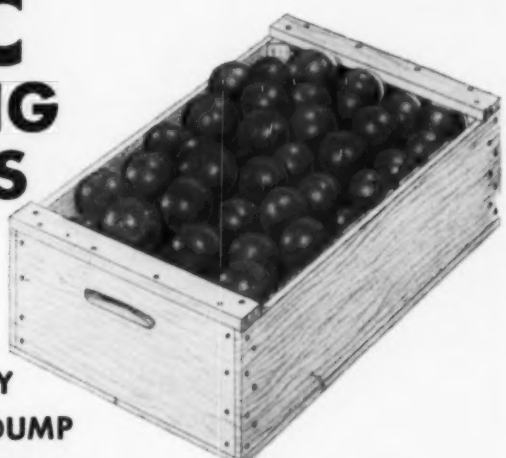
NKPA Sponsors Cutting Bee

The Research Committee of the National Kraut Packers Assn. is sponsoring a cutting to be held May 7-8 in Geneva, N. Y. Dr. Carl Pederson, of the N. Y. State Agricultural Experiment Station, will direct the program.

NPC Goal Is To "Sell More Peanuts"

The National Peanut Council met in New Orleans March 15-17 to determine how to cut the nation's already huge peanut surplus. The theme of the Council's 19th annual convention was "Sell More Peanuts," or, as one Texas

ASK US HOW
YOU CAN REDUCE
Handling COSTS
WITH
ABC
PICKING
BOXES
that



- PALLETIZE
- STACK EVENLY
- AUTOMATIC DUMP
- REDUCE BRUISE DAMAGE
- HAVE LONG LIFE
- SAVE SPACE

ABC's vast forest, sawmill and factory facilities assure immediate service.

We will gladly send information on the use of wooden picking boxes in mass production and automation handling methods.

American Box Corporation
2740 HYDE ST. SAN FRANCISCO 19, CALIF.

grower put it, "find ways of getting more peanuts into American stomachs."

NPC president William F. Seals of Washington, D. C., said the industry is working vigorously toward this goal by spending $10 million per year to advertise and promote the peanut as a wonderful food and oil.

George B. Freeman, president of the Hou-Tex Peanut Co., Houston, served as chairman of the convention. Elected chairman for the coming year was H. H. Knowles of Headland, Ala.

The Peanut and Nut Salters Assn. held its annual meeting and the Peanut Butter Manufacturers Board conducted a board meeting in conjunction with the Council's convention.

Nut Salters Show Concern Over Rising Prices

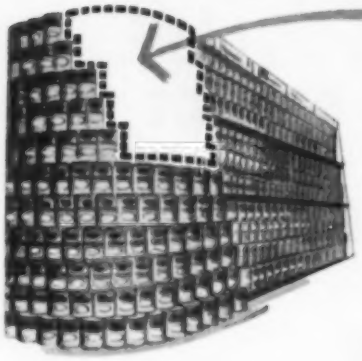
Members of the Peanut and Nut Salters Assn. left their two-day New Orleans meeting—held in conjunction with the National Peanut Council's annual convention—concerned over the huge California almond crop and the rising cost of turning out finished products. Their meeting was confined to informal discussions over these two situations.

T. Earle Bourne, secretary-treasurer of the association and treasurer of the Peanut Council, said the Salters are maintaining a close watch over the situation in California. Some association members, he said, expect the California growers to petition the federal government for rigid restrictions on almond imports. This would offset their own large yield and hold up prices. He added:

"We don't blame them for trying to hold up their prices, but as manufacturers and processors, we'd be concerned if they try to stop all competition. All we ask is for a chance to tell our side of the story." Mr. Bourne is president of Schindler Peanut Products Co., Baltimore, Md.

On manufacturing costs, Mr. Bourne stated that equipment costs and taxes have been major factors in the rising operational expenses. Advertising, labor, utilities, and freight rates have also climbed faster than nut prices, he added.

John Ritchie, head of the All American Nut Co. of Downey, Calif., was elected president of the association.



WILL IT COST YOU TOO MUCH . . . to fill this space?

Profitably meeting the growing demand for foods means more than just increasing production. It also requires consistent product quality . . . and low operating costs.

Replacing outdated processing machinery with modern Robins equipment can help protect *your* profits now and in the 1960s . . . by giving you greater production of high quality foods at less cost.

For details on how Robins equipment fits into your profit picture, see your Robins representative. Or, write for FREE TECHNICAL CATALOG.

AN EXAMPLE . . .

The Robins Thermetic Blancher keeps shrinkage at a minimum. Engineered steam flow completely eliminates guesswork.

A.K.Robins AND COMPANY, INC.

Manufacturers of Food Processing Equipment Since 1855

713-729 E. Lombard Street, Baltimore 2, Md.

NEW OFFICERS of the National Red Cherry Institute appear together immediately after elections during the meeting held in Chicago. L. to R.: Harold Bucholz, vice president; H. B. Pearson, retiring president; Lewis E. Walton, chairman of 1960 Cherry Pie Baking Contest; Everett Wiles, president; and William B. Powell, executive secretary-treasurer.

ASTA Members To Discuss Problems of World Trade

The American Spice Trade Assn. will hold its 53rd annual convention at Del Monte Lodge in Pebble Beach, Calif., May 24-28. Some 200 members of the industry, including representatives from overseas firms, will attend.

The discussions and business sessions of the spice group will be concerned with the current problems of world trade. Under discussion will be several important revisions in the Standard Spice Contracts.

CMI Elects Officers

Roger F. Hepenstal, treasurer of American Can Co., was elected to succeed William J. Milton as president of the Can Manufacturers Institute at the annual meeting. Reuben L. Perin, executive vice president of Continental Can Co.'s metal division, was named to succeed Mr. Hepenstal as vice president of the group.

THE ONLY LUG CAP . . .

deep sides give added strength; choice of plain or knurled sides; flat-seating threads for sure seal

WITH A LIVE RUBBER SEAL . . .

best withstands live steam; won't stick to glass; easy to apply; stays put; vacuum-seals

AND ONLY CROWN MAKES IT!

for cans · closures · crowns · machinery **CROWN**

CROWN CORK & SEAL COMPANY, INC., 9300 Ashton Road, Philadelphia 36, Pa.

Classified Advertising

RATES: Help wanted, positions wanted, machinery and equipment wanted or for sale or other classified notices—15 cents per word, 75c extra for blind box number. Minimum charge $4. Terms net prepaid. Classified ads are set in 6-point type. No cuts or special border permitted. Each line of capital letters charged for as two lines.

Classified-display and professional rate (borders and cuts permitted), 1-time, $25. per inch. One-inch, 12 monthly issues, paid in advance: $200. No agency commission or cash discount on classified or classified display.

FOR SALE—MACHINERY AND EQUIPMENT

FOR SALE: 2 only Model 830 Standard-Knapp 6-lane case packers, 1 Standard-Knapp 429 gluer and compression unit with "Wagner" taper for cartons, like new; Approx. 3000' Alvey heavy duty conveyor, including gravity and floor to floor belt conveyors with AC motors. Can be purchased in lots of 10' and up; Hartford-Empire unscrambler and rinser for quart bottles; other late model machinery. Available for immediate delivery, priced at tremendous bargains. Write for catalog to: Mr. Frank Kogler, Master Brewer, Fort Pitt Brewery, 16th & Mary Sts., Sharpsburg, Pittsburgh, Pa.

Stainless Tanks, 9—250 gallon, 3—375 gallon, 2—3000 Syrupers, 3 FMC-AB with drainers for 2½, No. 10 & 303 Pulpers, FMC Model 50 & 101, stainless w/motors. Urschel Dicers Model O, M & B, stainless M&S Filler, 10 pocket for 6-8 oz., SS valves. Elgin Filler, twin piston, for No. 10, stainless 12-oz. Std. Knapp Can caser, hi-speed for 211 x 414. Tomato Chopper, CRC stainless contact. Screw Cooker, 12" x 20 ft., stainless, inject type. California Machinery, 420 Market, San Francisco, Calif.

Used 12 line Straight line Model SL 55 "Geyer" Heavy Duty Piston Filler for any semi-liquid or semi-solid product. Will handle cans or glass containers. Range of sizes 4 fluid oz. to 16 fluid oz. Speeds 180 to 220 containers per minute. With or without separate motor driven agitator. Reasonably priced. The Filler Machine Co., Inc., 10 Penn Avenue, Rockledge, Philadelphia 11, Pa. Phone Pilgrim 5-0170.

FOR SALE: Frick 10x10 Model H compressor with 100 HP, 60 cycle, 220 volt, 3 phase AC motor, 4-speed lubrication, fittings, accessories, etc. With one "Niagara" 60-ton evaporative condenser, available for immediate inspection. Buy either or both, excellent condition. Inspection invited. STEIN BREWERY, 797 Broadway, Buffalo, N. Y. Telephone: CLeveland 8300.

FOR SALE: Standard Knapp No. 429 Top Gluer. Fitzpatrick sf. st. Comminuting Machines Models D & F. 3,000, 3,700 gallon stainless steel Vacuum Tanks with coils. Niagara Pressure Leaf Filters: 500, 100 sq. ft., Stainless Steel. Hapo Piston Filler. SEND US YOUR INQUIRIES. PERRY EQUIPMENT CORP., 1405 N. 6th St., Phila. 22, Pa.

FOR SALE: THE TEXTUREMETER—"Testing device of many uses," Portable-hand-operated — available about March 15th. shipment. Can be furnished in stainless steel bowl & punch—also metric & english combination gauge at small extra cost.
Max R. Pankratz, Exl. Distr.
Valders, Wis. Phone 73

FOR SALE: 3 only 2500-gal. ea. practically new Lithcote-lined tanks, as used in food processing plant in Buffalo, 62"x15' long, with manholes, covers, 2" vent, 2" outlet, float gauge, supporting lugs, etc. Like new. Buy one or all. Price: $750. ea. f.o.b. truck Buffalo. BOX 359, C/P.

FOR SALE: 1—18' Factory Rebuilt Russell's Continuous Atmospheric Cooker or Cooler for No. 2's and 303's holding 2080 cans, also 1—Vance & Baker Atmospheric Cooker or Cooler holding 800 No. 2—303 cans. General Food Equipment, Inc., P. O. Box 504, Lakeland, Florida.

ABC Model XSA case sealer, 250 gal. S/S Lee kettles, new 40 gal. S/C kettles, 42" x 72" retorts, 500 gal. S/S semi-tank agit., S/S viking pumps, new 400 lb. S/S ribbon mixers. Additional equipment in stock. We buy and sell. Aaron Equipment Company. 1851 Blue Island, Chicago, Illinois.

FOR SALE: Rapids-Standard Portable Electric Conveyor. 16 Ft. Long, Adjustable, Good Condition. No Longer Used Because superceded by Fork Truck. —$250.00.
Walter English Co.
Sta. E—Box 6927
Columbus, Ohio

CLEANING EQUIPMENT

For plant maintenance, tank cleaning and sanitation, hot "jet stream" cleaning with Sellers Hydraulic Jets. Send for Bulletin 424-B. Sellers Injector Corporation, 1604-K Hamilton Street, Philadelphia 30, Pa.

FOR SALE: Hasselberg Model 5 air compressor 9x8, cap. 200 CFM at 350 RPM at 100 psi, with GE 40 HP, 220 volt motor, reconditioned and available for immediate delivery. CHAS. S. JACOBOWITZ CORP., 3080 Main St., Buffalo 14, N.Y.

FOR SALE—9-cypress wood tanks 8' High x 9' Diameter.
Dave Slinger—Randolph, Wis.

FOR SALE: "Tuc" Can Shaker, heavy duty, for all can sizes, set up for 300x407 cans, Serial CAF-868, 220 Volt Motors, bought new July 1958 for $3245.00. Bids invited. S. E. Mighton Co., Bedford, Ohio

FOR SALE—KETTLES, LABELERS, Retorts, Fillers, Tanks, Pumps, Can Washers, sterilizers, Case Packers, etc. Send for list. Loeb Equipment Supply Co., 830 W. Superior St., Chicago 22, Ill.

2 No. 10 Casers KNAPP Model F. A. Packer's serial number 803 and Model F. A. serial number 1495. One F.O.B. Riverbank, one F.O.B. Woodland, $1500.00 each. Box 159, C/P.

FOR SALE: One 250 gallon 2/3 jacketed stainless steel kettle with steel jacket outside, 3" outlet, 1" safety valve, for 90 lbs. working pressure, in very good condition. S. E. Mighton Co., Bedford, Ohio.

FOR SALE—1958 HUME Pea Cutter. Only cut 50 acres. Norman Brewer, RR1 Box 28, Franklin, Ind. Phone—Redfield 6-4285.

WANTED MACHINERY

WANTED—Hydraulic Press with 18" rams. Filter 175 to 200 sq. ft., stainless steel. No. 10 M & S Piston Filler.

Alard Industries Inc.
P.O. Box 367, Williamson, N. Y.
Phone Williamson 3201

Dura-Mill 6 oz. Hi-Speed Can Filler, 200 CPM; New-Way Labeler V65B, up to gal. cont., elevator, 7 twisters; Burt Caser No. 8042; New-Way Caser A301-407. WANTED YOUR SURPLUS EQUIPMENT. Ace Processing, 6829 South Kenwood Ave., MUseum 4-3380, Chicago 37, Ill.

Labeler, World rotary C11000 series body neck Model 429 T&B or Top Case Sealer not old style No. 10 Stainless M&S filling machine. Urschel Gdicer, stainless. California Machinery, 420 Market, San Francisco, Calif.

WANTED: 307 x 306 or 307 x 409 change parts for Canco 300 vacuum closing machine. Box 849, CANNER/PACKER.

WANTED: Plate Freezers. Furnish full details as to price, size, and condition. Tony Downs Foods Co., St. James, Minnesota.

WANTED: S. S. Steam Kettle 250 or 300 Gal. State working pressure, depth, width and size outlet. PATIO FOODS, Box 10158, San Antonio, Texas

WANTED: #303 Changer Parts for Continental Can Closing Machine—Type 334-CR-P7. Box 649, CANNER/PACKER.

HELP WANTED

REGIONAL SALES MANAGERS

Medium-sized fruit processor seeks two men to become Regional Sales Managers. Age: 25-35 preferred. Some experience in dealing with brokers, chain store buyers, and wholesalers desired but not mandatory. Company offers excellent benefits and salary commensurate with experience. Write giving details of education, training, experience, and salary expected to L. W. Brown, National Fruit Product Company, Winchester, Virginia.

PLANT ENGINEER. Poultry processing plant on Long Island. Must have experience with 2-stage ammonia systems and high-pressure boilers. Send complete resume, including references and salary desired, to PERSONNEL, P. O. Box 68, Eastport, N.Y.

OTTO W. Cuyler CORPORATION
Webster, New York • Phone 270 or 370

FOOD PROCESSING MACHINERY
NEW—USED—REBUILT

FOR SALE

(2) FMC Steam Peelers	(2) #10 Weber Apple Fillers
(3) Pfaudler Steam Peelers	(2) Panama Closing Machines, 2's, 2½'s, 303's
(6) #303 Canco Closing Machines	(1) Pfaudler 14 pkt Filler for 211's
(100) Std. Perf. Retort Crates	(2) Urschel "M" Slicers
(5) CRCO "F" Bean Snipper, large	(1) CRCO Can Unscrambler for 303's
(8) Urschel 50 C Bean Cutter, S.S. & galv.	(1) FMC 8' Blancher, SS drum
(4) CRCO Bean Grader, #4 & #5	(2) FMC 8' Blancher, galv., with motor
(3) FMC Cont. Pressure Cooker, #2 & 303	(8) FMC Double Husker, motor drive
(1) FMC Cont. Pressure Cooker for 2½'s	(4) Universal #2 Corn Cutters
(2) Reinhardt Strawberry Slicer and Mixer	(2) Tuc Corn Ear Trimmers
	(2) Std. Knp. 429 T & B Case Gluers
	(2) Urschel "B" Dicers
	(1) FMC SS 10-valve Filler, 46 oz.

WRITE FOR 1959 CATALOG — 10,000 ITEMS

Serving the food processing industry since 1912

FOUNDED 1922
Food and Drug Research Laboratories
INCORPORATED
Maurice Avenue at 56th Street, Maspeth 78, New York City
WESTERN REPRESENTATIVE: WOLFGANG HUBER, Ph.D.
1079 Lombard St., San Francisco 9, Calif. Tel: Prospect 6-1415

WANTED—MAN TO WORK IN MODERN PICKLE PLANT located in middle west, as packing line superintendent. Must have thorough knowledge of packing equipment, White Cap Machines and high speed production. Box 339, c/o Canner/Packer.

WANTED: Experienced fruit buyer by a leading New York State processor. Must be willing to travel. Knowledge of Sales and Plant Management experience also helpful. Box 349, c/o Canner Packer

POSITIONS WANTED

POSITION WANTED: Twenty-five years' experience as plant superintendent from field to finished product, experienced in canning all vegetables, fruits, and jellies. Write Virgil Yerrick, 1041 Maple Ave., Jackson, Michigan.

POSITION WANTED: Superintendent who is elderly but active wants season job. Supervise production, maintenance. General line including Peas, Beans, Corn. Prefer Midwest. Box 549, CANNER/PACKER.

MISCELLANEOUS

TOMATO PLANTS — CABBAGE PLANTS: Virginia State Inspected. We guarantee hardy, disease free plants. Start with the best this year—use plants from our Premium Certified seed. Cabbage, Broccoli, Cauliflower; ready now: Tomato, Pepper; ready May 20. TOP QUALITY—PROMPT SERVICE. Write or telephone for catalogue and prices. J. P. Councill Company, LOgan 23546, Franklin, Virginia. "Virginia's Oldest and Largest Growers."

WE PURCHASE raw, processed or frozen foods, discontinued mis-manufactured, dents, etc. Have institutional and foreign markets which would not disturb your present market. Berlin Co., 2900 W. Peterson, Chicago 45, Ill. RO 1-4348.

Food Broker, Minneapolis-St. Paul area available to handle quality food specialties for wholesale food, drug and dairy trade. Write Box 259, Canner/Packer.

Cook-Chex takes the last trace of guesswork out of production control.

1. Eliminate wrong cook schedules.
2. Keep retort baskets in sequence.
3. Guard against "by-passing" retorts.
4. Provide low-cost permanent records for your cooking-plant.

Cook-Chex is the chemically impregnated retort tag that changes from purple to green *only* after your run has been properly and completely retort processed. Hang a Cook-Chex on each basket before retorting—inspect it after withdrawing. You have the full "protection" record at a glance. It's that easy—that sure.

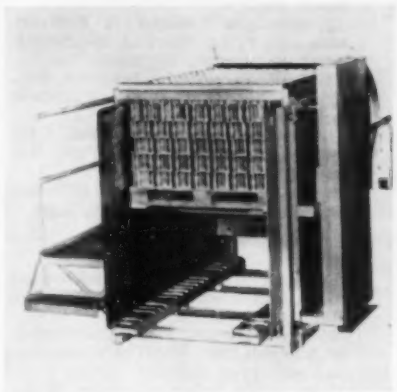
Used by *all* major packers. Approved and recommended by cannery inspectors. Ask *them!*

Send for Free samples.

ASEPTIC-THERMO INDICATOR CO.

Dept. CP-5, 11471 Vanowen St., No. Hollywood, Cal.

INTRODUCING THE *NEW*
KEY KAN DE-PALLETIZER



The answer to reducing empty can handling costs.

Adjusts to fit all can sizes.

Adjusts to any pallet size.

Discharges right, left, or both.

Capacity to 50,000 cans per hour.

An economically priced semi-automatic unit.

Built to the same high quality standards as the KEY FROTH FLOTATION CLEANER by:

TELEPHONE 447

Key Equipment Company

Manufacturers of Food Processing Machinery

MAIL THIS COUPON

KEY EQUIPMENT CO., INC.
P. O. Box 406
Milton-Freewater, Oregon

Please send me without obligation your brochure on the Key Kan De-Palletizer.

Name .....
Company .....
Address .....
City ..... State .....

CY BELT says

"We make more different types of processing belts than anyone else!"

Cyclone makes all four basic styles of conveyor belting: spiral woven friction drive, spiral woven chain drive, flat wire friction or sprocket drive, and flex-grid. These are available in the widest variety of sizes, meshes, weaves, steels and alloys. We make reinforcing members, flights, side plates and other specialties to meet specific needs. That's why our recommendation can be tailored to *your* plant and *your* product. Why not contact a trained Cyclone representative for help in analyzing your processing and material handling problems? Fill in the coupon today.

USS and Cyclone are registered trademarks

Cyclone Metal Conveyor Belts
Spiral Woven · Flat Wire · Flex-Grid

Prompt service to belt users is assured by two factories, one in the Middle West and one on the Pacific Coast.

Cyclone Fence Dept.
American Steel & Wire
Division of
United States Steel

USS

Manufactured at Waukegan, Ill. and Oakland, Calif. · Sales Offices Coast to Coast

MAIL THIS COUPON

Cyclone Fence, American Steel & Wire
Dept. D-59, 614 Superior Avenue, N.W.
Cleveland 13, Ohio

Please send me, without obligation, your catalog No. 5 on Cyclone Processing Belts.

Name .....
Company .....
Address .....
City ..... State .....

COMING EVENTS CALENDAR

May

4-6—**Biscuit Manufacturers Assn. and Biscuit Makers Institute, Inc.**, joint convention, Palmer House, Chicago, Ill.

5-7—**14th Industrial Waste Conference**, Purdue Memorial Union Building, Lafayette.

7-8—**National Kraut Packers Assn.**, cutting bee and meeting, N. Y. State Agricultural Experiment Station, Geneva, N. Y.

8-9—**National Frozen Food Distributors Assn.**, directors' meeting, Greenbrier Hotel, White Sulphur Springs, W. Va.

17-21—**Institute of Food Technologists**, annual meeting, Philadelphia, Pa.

21-**Packaging Assn. of Canada**, Montreal Chapter, seminar, Ruby Foo's, Montreal.

24-27—**Super Market Institute**, convention and exposition, Atlantic City, N. J.

24-28—**American Spice Trade Assn.**, annual convention, Del Monte Lodge, Pebble Beach, Calif.

June

1-3—**Pacific Seedsmen's Assn. and Idaho-Eastern Oregon Seedsmen's Assn.**, 33rd annual convention, Sun Valley, Idaho.

8-10—**Grocery Manufacturers of America**, Greenbriar Hotel, White Sulphur Springs, W. Va.

9-13—**Inter American Food Institute, Inc.**, second Inter American Food Congress, Carillon Hotel, Miami Beach, Fla.

14-15—**Michigan Canners & Freezers Assn.**, spring meeting, Whitcomb Hotel, St. Joseph, Michigan.

14-17—**Processed Apples Institute, Inc.**, eighth annual meeting, Whiteface Inn, Lake Placid, N. Y.

21-25—**National Assn. of Retail Grocers**, annual meeting, Navy Pier, Chicago, Ill.

21-25—**Assn. of Food & Drug Officials**, 63rd annual meeting, Boston, Mass.

August

10-13—**National Food Distributors Assn.**, 32nd annual meeting, Sherman Hotel, Chicago, Ill.

13-15—**Institutional Food Distributors of America Div.**, USWGA conference and mid-year meeting, Green Briar Hotel, White Sulphur Springs, W. Va.

23-25—**1959 Internation Clover Farm**—Foodland, 33rd anniversary convention, Toronto, Ontario.

September

9-10—**Pet Food Institute**, 2nd annual convention, Drake Hotel, Chicago, Ill.

October

15-17—**Florida Canners Assn.**, 28th annual convention, Hollywood Beach Hotel, Hollywood, Fla.

21-23—**National Agricultural Chemicals Assn.**, 26th annual meeting, French Lick-Sheraton Hotel, French Lick, Ind.

25-28—**National Frozen Food Distributors Assn.**, merchandising exposition, Sherman Hotel, Chicago, Ill.

29-30—**National Pickle Packers Assn.**, annual meeting, Drake Hotel, Chicago, Ill.

November

5—**Illinois Canners Assn.**, fall meeting, LaSalle Hotel, Chicago, Ill.

17-20—**Packaging Machinery Manufacturers Institute, Inc.**, "PMMI Show of 1959," New York Coliseum.

23-24—**Michigan Canners' and Freezers' Assn.**, fall meeting, Pantlind Hotel, Grand Rapids, Mich.

December

7-8—**Tri-State Packers Assn.**, annual meeting, Haddon Hall, Atlantic City, N. J.

9-11—**Grocery Manufacturers of America**, Waldorf Astoria, New York, N. Y.

12-16—**National Food Brokers Assn.**, National Food Sales Conference, Chicago, Ill.

Merchandising Calendar

June 1-7: Natl. Circus Week (Clown Club of America, River Road, Bernardston, Mass.).

June 14: Flag Day (Presidential proclamation).

June 18-26: Mayonnaise and Salad Dressing Week (Mayonnaise & Salad Mfrs. Assn., 325 S. Michigan Ave., Chicago, Ill.).

June 21: Father's Day (Natl. Father's Day Committee, 50 E. 42nd St., New York 17, N. Y.).

July 1-31: Natl. Iced Tea Time (Tea Council, 500 5th Ave., New York 36, N. Y.).

July 1-31: Natl. Picnic Month (Am. Bakers Assn., 20 No. Wacker Dr., Chicago, Ill.).

July 1-31: Natl. Hot Dog Month (Natl. Hot Dog Month Council, 3520 So. Morgan Ave., Chicago 9, Ill.).

July 4: Independence Day (Presidential proclamation).

Aug. 1-Sept. 30: Back To School Month.

Sept. 1-30: Natl. Better Breakfast Month.

Sept. 7: Labor Day.

Sept. 20-26: Natl. Dog Week.

Oct. 1-31: Natl. Rice Harvest Festival (Rice Consumer Serv., Realty Bldg., Louisville 2, Ky.).

Oct. 1-31: October Cheese Festival (Amer. Dairy Assn., 20 N. Wacker Dr., Chicago 6, Ill.).

Oct. 12: Columbus Day.

Oct. 15-24: Natl. Macaroni Week (Natl. Macaroni Inst., 139 N. Ashland Ave., Palatine, Ill.).

Oct. 15-24: Natl. Apple Week (Natl. Apple Week Assn., 1302-18th St., N. W., Washington 6, D. C.).

Oct. 17: Sweetest Day.

Oct. 17-25: Natl. Donut Week.

Oct. 19-25: Natl. Fish and Seafood Week (Natl. Fisheries Inst., 1614-20th St., N. W., Washington 9, D. C.).

Oct. 25-31: Natl. Honey Week (Amer. Honey Inst., 114 N. Carroll St., Madison 3, Wis.).

Oct. 31: Hallowe'en.

I.F.T. Sections Calendar of Meeting Dates

Eastern

Philadelphia: May 5, Mr. John J. Mitchell, cannery superintendent, Keystone Mushroom Co., on "The World of Mushrooms."

Midwest

Chicago: May, Warren Jones, Management Controls, Des Plaines, Ill., on "Statistical Quality Control Applications in the Food Industry."

Chicago: Sept. 26, a tour of the Dept. of Dairy and Food Industries, University of Wis., Madison; attendance at Wisconsin-Stanford football game is being arranged.

St. Louis: May 11, installation of new officers.

St. Louis: May 17-21, 19th annual meeting, Bellevue-Stratford Hotel, Philadelphia, Pa.

Western

Nor. Calif. (San Joaquin): May 5, Fresno, Dr. Emil Mrak, University of Calif., on "Food Additives."

Nor. Calif.: June 6, annual picnic, Blackberry Farm, Monte Vista, beginning at 12 noon.

So. Calif.: June, a field trip is being considered.

So. Calif.: Sept. 16, Food Man of the Year Meeting.

Southern

Mexico: First Tuesday of each month. For time and place phone Walter E. McAllister, Mexico City 11-90-00.

Advertisers In This Issue

American Box Corp. 69
American Can Co. 14-15
Anchor Hocking Glass Corp. 62-63
Angelus Sanitary Can Machine Co. 75
Aseptic-Thermo Indicator Co. 73

Ball Bros. Co., Inc. 49
Bausch & Lomb Optical Co. 66
Berlin Chapman Co. 68
Burt Machine Co. 52

Chemical Products Div., Darworth, Inc. 61
Clipper Belt Lacer Co. 48
Container Corp. of America 21
Corn Products Sales Co. 23
Crompton & Knowles Packaging Corp. 46
Cromwell Paper Co. 18
Crown Cork & Seal Co., Inc. 71
Cuyler, Otto W., Corp. 72
Cyclone Fence Dept. American Steel & Wire Div. U. S. Steel 68, 73

Diamond Crystal Salt 26

Electro Mechanisms, Inc. 44
Emhart Mfg. Co. 20

Food Machinery and Chemical Corp. 13

Geigy Agricultural Chemicals 65
Griffith Laboratories, The 8-9

Hamilton Kettles Div. of Brighton Corp. 55
Hardy Salt Co. 58
Hazel-Atlas Glass Div. Continental Can Co. 24-25
Heekin Can Co., The ..... 4th Cover
Hoffmann-La Roche, Inc. ..... 2nd Cover
Hume, H. D., Co. 45

International Salt Co., Inc. 47

Key Equipment Co. 73

Ladish Co., Tri Clover Div. 22
Langsenkamp Co., F. H. 55

Machinery & Equipment Co. 55
Maison Frederic Fouche 3
Malayan Tin Bureau 53

National Starch Products, Inc. ..... 3rd Cover

Oakite Products, Inc. 64
Owens-Illinois 11

Package Research Laboratory 56
Penick & Ford, Ltd. 19
Pfizer & Co., Inc., Chas. 6

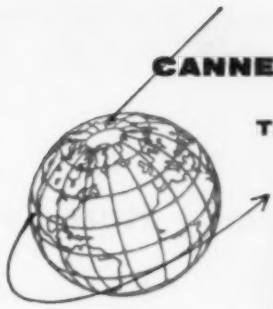
Radio Corporation of America 59
Robins and Co., Inc., A. K. 70

Scott Viner Co. 52
Shuttleworth Machinery Corp. 55
Simplicity Engineering Co. 17
Speas Co. 51
Swift & Co. 67

Ton-Tex Corp. 54

United States Rubber Co. 42
Urschel Laboratories, Inc. 12, 51

Warner, Lansing B., Inc. 16
Waukesha Foundry Co. 4
White Cap Co. 40-41



CANNERS AND CAN MAKERS

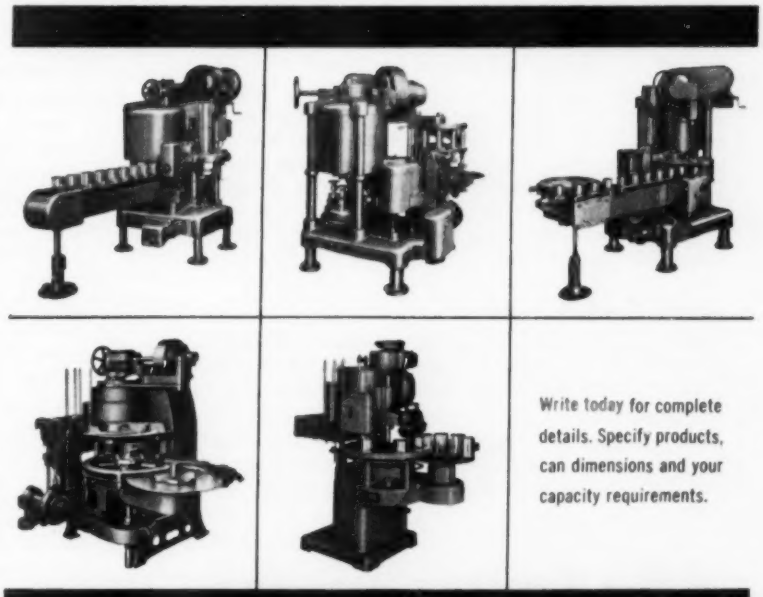
THE WORLD OVER

ARE SWINGING TO

ANGELUS

CAN CLOSING MACHINES

Through simplified design, ease of operation, ruggedness, and a wide range of accessories designed for quick low cost change over, Angelus Can Closing Machines give you these essentials for more efficient operation—LOWER FIRST COST—LOWER MAINTENANCE—HIGHER PRODUCTION. The complete line of Angelus seamers with their wide range of accessories meet every round can closing requirement for any type of product, liquid or solid, from 30 up to 500 cans per minute Angelus, with over 45 years of specialized experience, is the nation's only manufacturer exclusively producing automatic round can closing machines.



Write today for complete details. Specify products, can dimensions and your capacity requirements.

ANGELUS

Sanitary Can Machine Company

Cable Address "Angelmco" Western Union Code

4900 Pacific Boulevard • Los Angeles 58, Calif.

Fights Within The Family Hurt Everyone

Every now and then some overzealous partisan for one or another of the divisions of the processed food business proposes a sort of holy war against the other branches. He urges that the canners, or the freezers, or the dry or glass food packers, launch an all-out crusade of crying down the other fellow's quality, nutritive value, convenience, taste appeal, economy and what have you.

This is to set down for the record why no major segment of the food-manufacturing industry has ever adopted such a no-holds-barred promotion plan, and why no one is going to do so in the future.

Multi-process Packers

For a good many of you, constructive and positive competition is automatically the rule, because you operate in more than one of the basic divisions.

Libby the canner cannot attack frozen foods without treading on the toes of Libby the freezer. Calpak the glass packer is also Calpak the canner and Calpak the dried fruit producer. Birds Eye the freezer must remember that other General Foods divisions also pack and sell dry, canned and glassed products.

Big firms like these—and like Campbell, Stokely and Minute Maid—and many smaller multi-field packers in total are responsible for more than half the annual U.S. output of canned, dry, frozen and glassed foods. Thus cooperation, and the right sort of competition, are assured for more than 50% of the total volume, including a heavy proportion of the nationally-advertised packer brands.

Multi-field Packers

To this group must be added the many food manufacturers who are basically in one field, but whose processes blur over into another type of operation.

Frozen concentrates, for example, are classed as frozen products, but many of the techniques employed in their production are similar to those in canning, and the major step of concentration is allied to the dry food field.

Dehydro-frozen potatoes and dehydro-canned apples, two relatively new products, show an even more complete blending of two of the processed food industries.

And, in addition, the methods of one branch are often used to provide the raw materials for another . . frozen fruits go into glassed preserves, dried beans have long been popular ingredients for canned and glassed pork-and-beans, frozen vegetables are widely used for canned soups, and so on.

More and more of these multi-process packs will appear in the future, still further reducing the number of firms who can afford bitter attacks upon the quality or value of food preserved by competitive methods.

Modern Merchandisers

The application of scientific marketing methods to the food business also is a deterrent to unbridled and cutthroat competition.

Today's food merchant expects each square foot of floorspace to deliver adequate value to him in profit, traffic, impact, prestige, turnover. He wants the products he sells to complement and feed each other, to create the feeling among his customers that here is a market full from wall to wall with excellent merchandise at proper prices.

The frozen food or the glassed food business could find no surer way of getting into hot water with the retailer than to suggest to Mrs. Housewife that a large share of what he is seeking to sell her is tasteless, overpriced, lacking in nourishment. The old sales adage, "a knock is a boost," could never be more true than in this instance.

Profit from Cooperation

In addition to these negative points, there are positive advantages which have resulted from the industry branches working together. For example:

Faster progress in improvement of raw product growing and handling has come when canners and freezers have shared their knowledge.

Better processing and interior transportation have been the product of joint canner-glass packer research.

Improved packaging of both dry and frozen foods has been provided by experience gained in the two fields.

Major sales events have developed when products of two types have been combined in a single compelling recipe or menu.

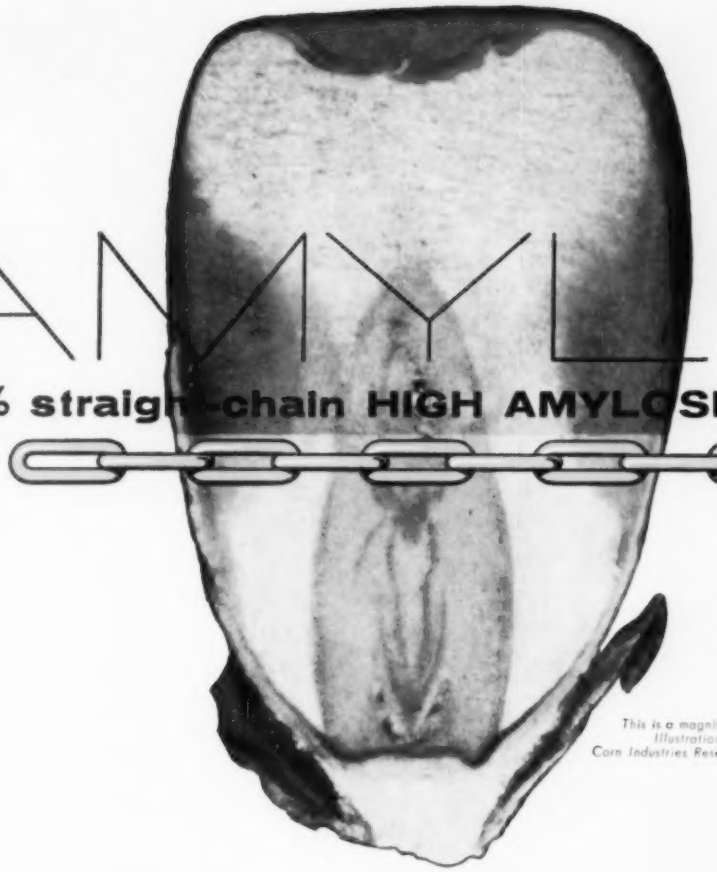
Transportation and storage improvements in one line have been applied with signal success in others.

So, while we can always expect aggressive and enthusiastic competition among the packers of dry, canned, frozen and glassed foods, we can also be sure that it will not deteriorate into the level of a dogfight . . and we can be certain that the various processed food businesses will tend to work more closely together with every passing year.

El Stark
Editor

AMYLIN

55% straight-chain HIGH AMYLOSE content



This is a magnified kernel of corn
Illustration courtesy of
Corn Industries Research Foundation, Inc.

A RADICAL GENETIC CHANGE

science and nature synthesize a new chemical polymer

NOW AVAILABLE in semi-commercial quantities. A radically altered natural starch polymer that contains 50-55% amylose —the straight-chain molecular component of starch.

This is the first major genetic advance leading to a potentially feasible starch containing 100% amylose. It's an exciting genetic achievement. Until now, the amylose content commonly available never exceeded 27%.

Geneticists have worked for many decades to develop special qualities in hybrid corn. Such as high yield, drought and insect resistance. A change in chemical structure was first accomplished industrially by the breeding of corn containing 100% amylopectin which NATIONAL introduced as AMIOCA in 1943. High amylose corn represents another major industrial accomplishment in the new area of plant breeding intended to alter the polymer structure of the starch itself which NATIONAL is introducing as AMYLIN®.

Milled from high amylose corn in the same way as ordinary starch, AMYLIN represents a marked step towards the unusual properties of amylose itself: Film formations, with greater strength than ordinary starch films. With improved water, grease and oil resistance. Flexibility. Unusually strong gels. Adhesiveness.

To the inquiring mind, these unusual properties suggest a variety of applications: Soluble and digestible packages for instant coffee, meats, vegetables, fish, fruit. Butter. Vegetable shortenings. Soluble packages for soap powders and insecticides. Grease and oil resistant coatings. Water and humidity resistant binders. Improved textile sizes and finishes, etc.

An invitation is extended to all who are interested in exploring the properties of this new high amylose starch.

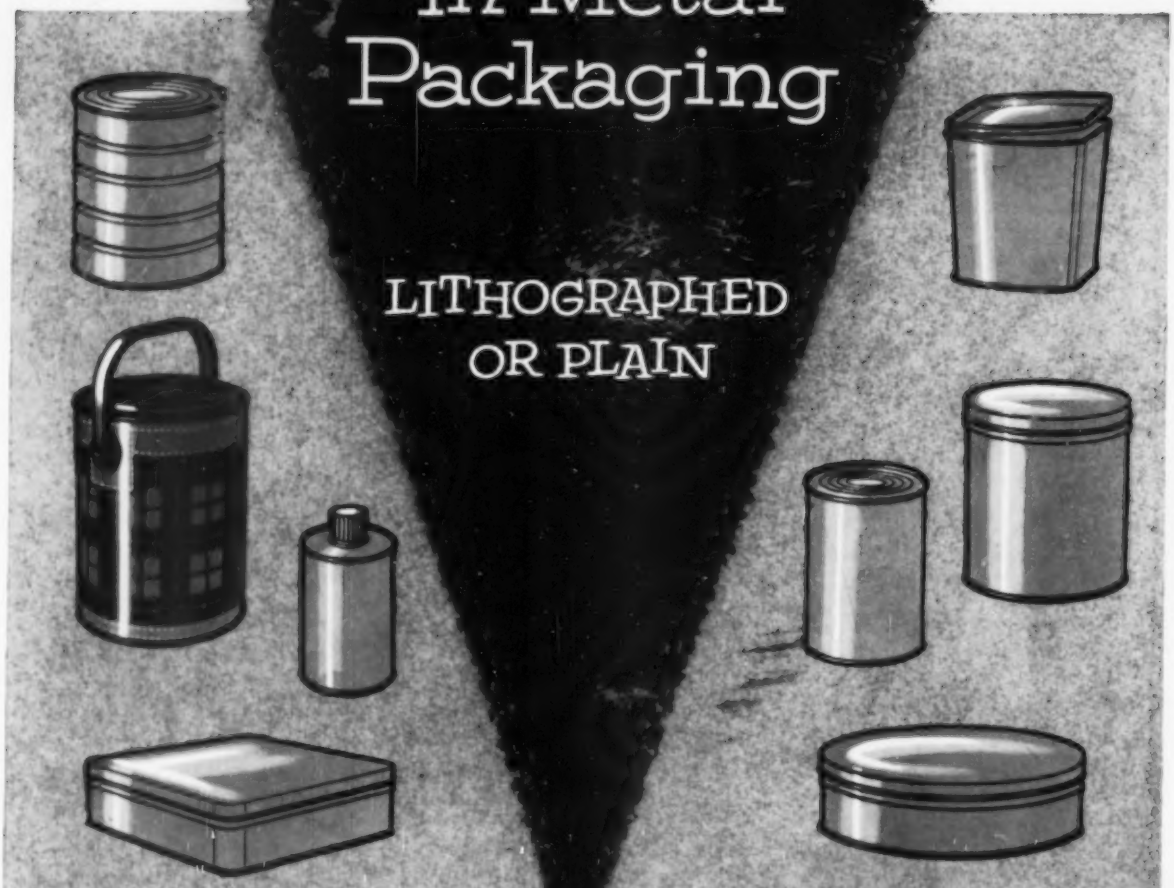
Address: Amylin Starch Division, National Starch Products Inc., 750 Third Avenue, New York 17, N. Y.

National

STARCH PRODUCTS INC.

Specialists in Metal Packaging

LITHOGRAPHED OR PLAIN



DURING its fifty-eight years in the metal packaging field Heekin has become a specialist . . . a specialist in providing you with the finest metal package made. That's why Heekin Product Planned Cans are your best salesmen. Let Heekin Product Planned Cans go to work for you. Heekin Cans . . . made by specialists in the metal packaging field.

HEEKIN
Product Planned
CANS

THE HEEKIN CAN CO. *PLANTS IN OHIO, TENNESSEE & ARKANSAS—SALES OFFICES; CINCINNATI, OHIO; SPRINGDALE, ARKANSAS*